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THE INLAND ARCHITECT AND NEWS RECORD

Entered at the Postoffice at Chicago as second-class matter, June 1, 1905.

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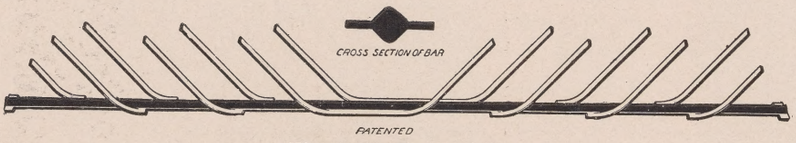

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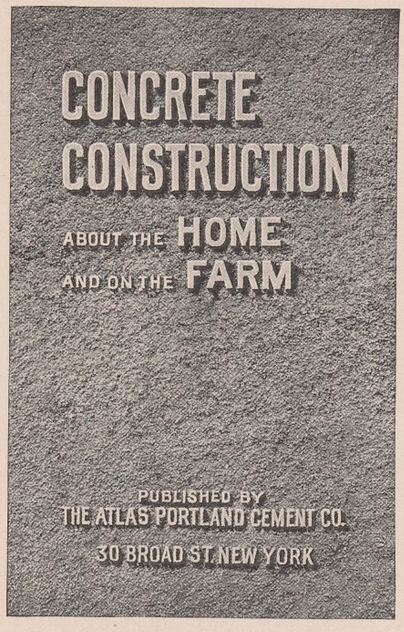

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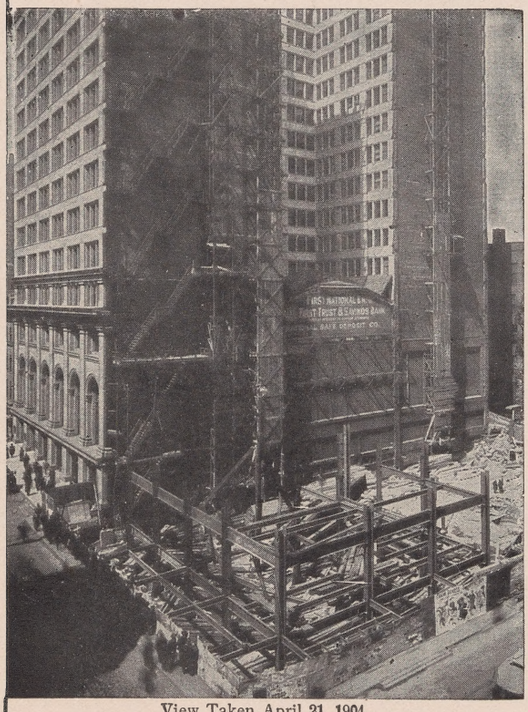

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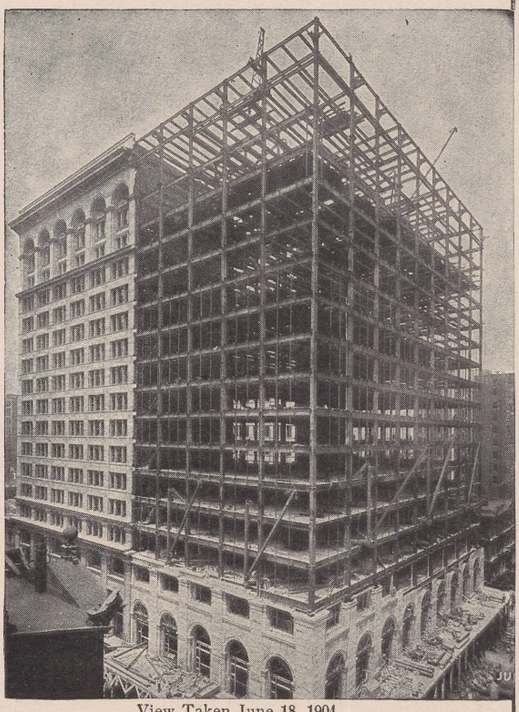

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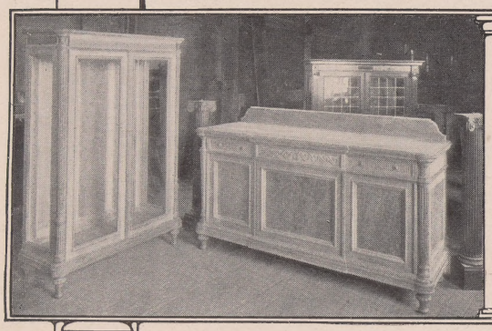

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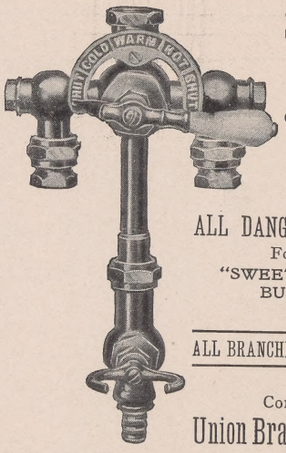

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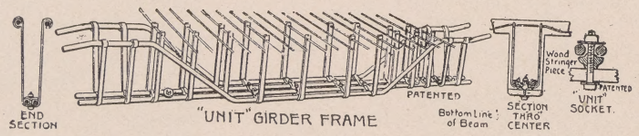

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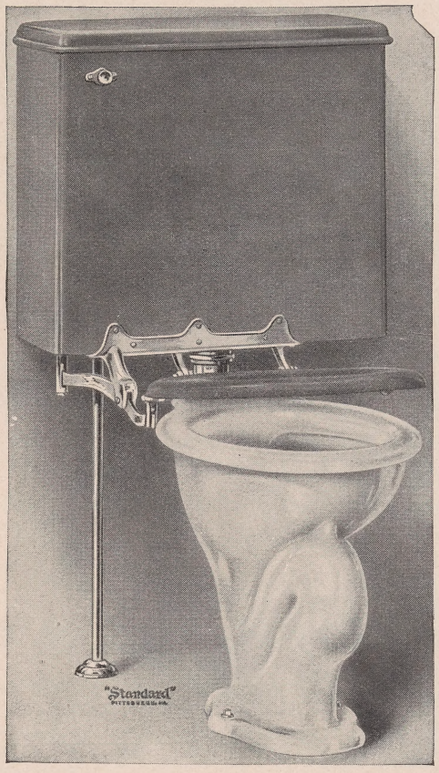

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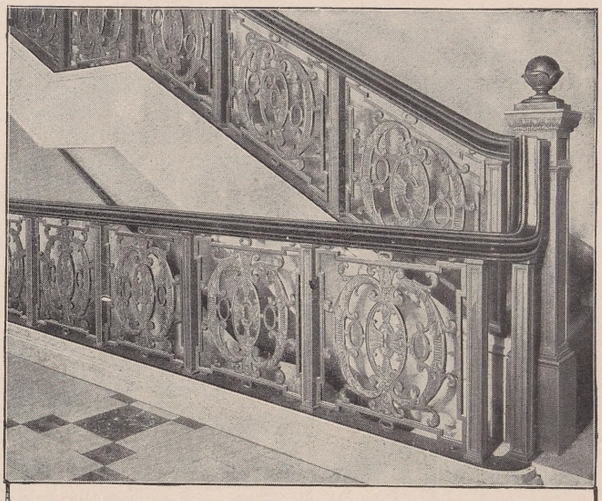

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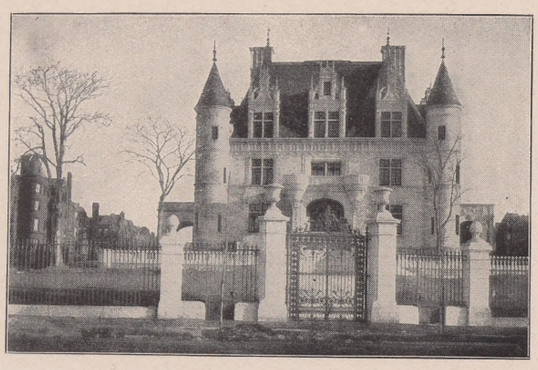

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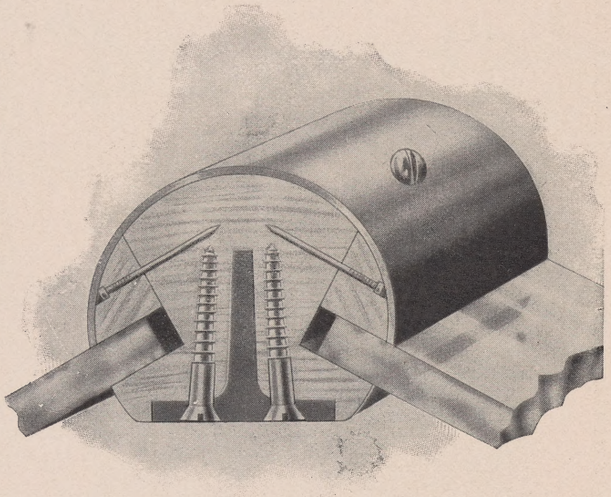

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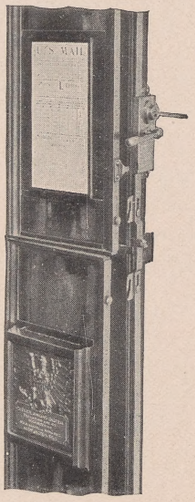

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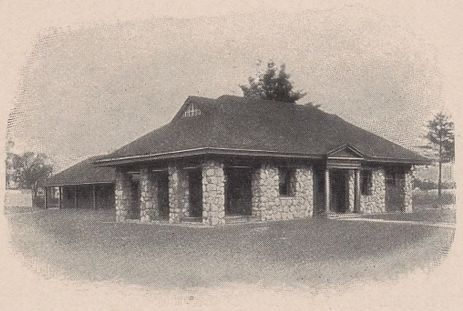

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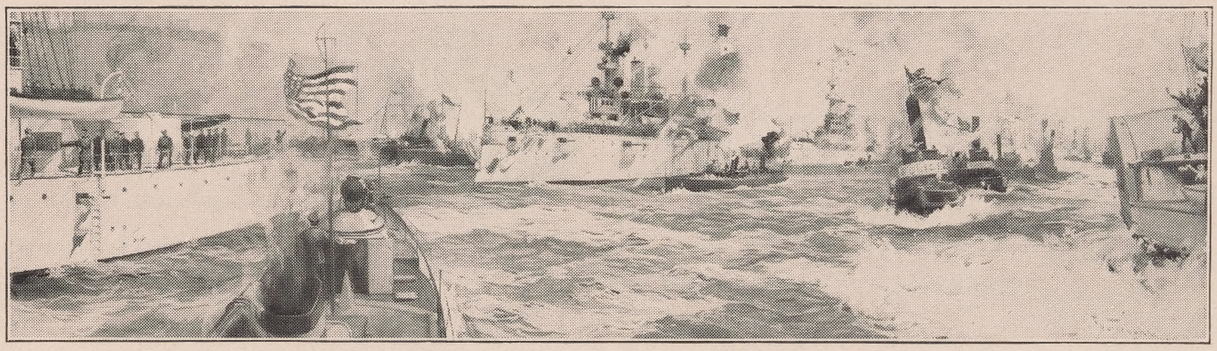

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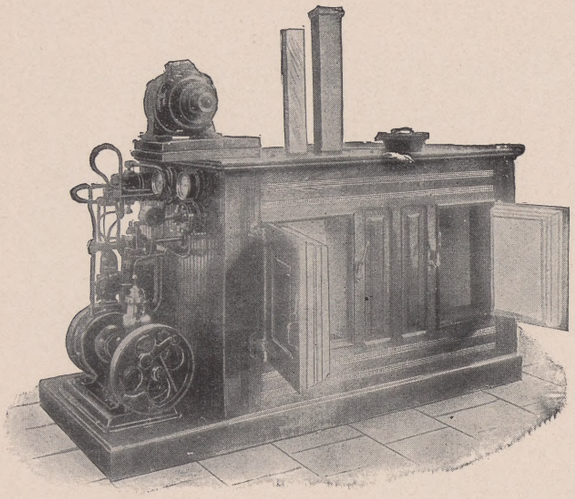

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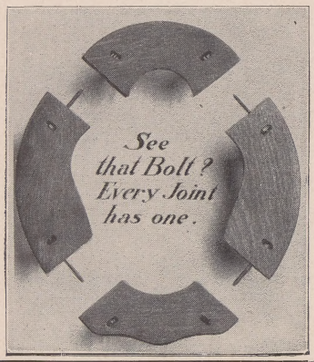

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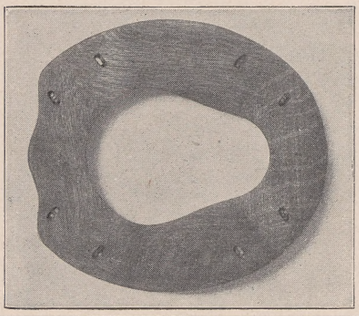

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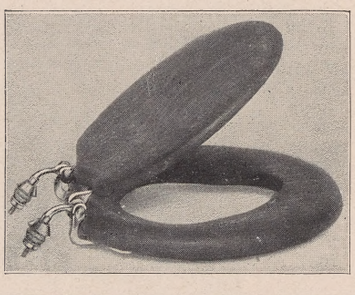

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THE INLAND ARCHITECT AND NEWS RECORD

VOL. XLVII. APRIL, 1906 NO. 3

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NEXT CONVENTION AT WASHINGTON, D. C., 1907.

The Architect and Landscape Work.

In the specialization that has developed in his profession, has not the architect relinquished control of work that he could direct to the best advantage and with more satisfactory results than obtain by present methods? Take the example of landscape designing in connection with residences. This is rapidly growing in importance and appreciation; nothing adding more to the effect of such buildings than the landscape treatment. In nearly every instance where there are sufficient grounds for landscape effects, they are given into the hands of the landscape architect for development. The grounds are usually beautified, but often there is the natural desire on the part of the landscape artist to emphasize his work to the subordination of the residence itself. It is questionable if this condition can be improved under present procedure. We incline to the belief that greater harmony would obtain between the residence and its surroundings were the landscape work also in the control of the architect. The effect of this arrangement would be to give to each division of the problem its due importance. There would be such treatment of the grounds as would afford an attractive and appropriate setting with the house as the central feature. In this way the architectural expression would be enhanced without the forced consciousness that the house existed chiefly as an excuse for the embellishment of the surroundings. Not alone would the house and grounds be brought into more harmonious relation by this change, but the entire problem would be simplified and much friction avoided.

The present seems a favorable time for the architect to assume control of the landscape architecture. He is being called upon constantly as the adviser in the civic improvements now under consideration and in progress to such an extent throughout the land. Thus he is being brought into daily contact with the development of landscape problems on a large scale in which he is recognized as the expert adviser. From this position the transition to the charge of the landscape designing of estates and other grounds would seem entirely natural. That many architects have this possibility in mind is indicated by the growing interest shown in literature bearing upon this subject. Apparently the architect appreciates in an increasing degree the important place that carefully studied and appropriate landscape art has with relation to the architectural design that it beautifies. He is coming to feel that the best results can be obtained only through treating the entire problem as a united whole to be designed and carried out under the direction of one mind. Judging from present tokens this control of the landscape work by the architect is not a remote possibility, but a procedure that will prevail in the near future. With the increased scope of the architect's duties would come, of course, additional responsibilities, but the designing of the grounds is so intimately associated with his architectural treatment and has so strong a bearing upon the attainment of harmony in the whole that he is sure to find compensating pleasure in the landscape work.

Individuality in Architectural Design.

In another column is published in full a paper entitled "The Western Spirit." The paper is by George W. Maher, architect, and is an earnest plea for the independence in design that characterizes the work of a number of progressive men in the West, and especially in Chicago. The argument is not new that present day domestic architecture in America is not expressive of the life and habits of the people. Starting with this condition as axiomatic Mr. Maher advocates a more general effort on the part of architects to express American life and conditions in American buildings. He notes with hopefulness that this worthy object is making considerable progress in some sections of the country. In his paper and in the discussion that followed its reading before the Chicago Architectural Club, Mr. Maher gave evidence of much intelligent thought upon the subject. His conclusions are supported by many years of consistent practical application of his theories in his professional practice. He rightly regards that no original work can be produced at first that is faultless; that before this is possible a theme must be worked over many times; that a degree of perfection can not be expected without persevering effort. It was pointed out, however, that the new thought in design was capable of producing beautiful buildings expressive of modern life, while working from precedent could only duplicate past forms inappropriate for present conditions.

In the designing of a residence the essential inspiration should come from the individual who is to be its occupant. If designed to fit the needs of a client his enthusiasm is awakened and he is encouraged to place reliance upon his architect, a result that is not likely to obtain from the procedure of copying a design for him. The owner in the latter case becomes a dictator and the architect practically a draftsman only. Mr. Maher advocates developing the design from the characteristics of the owner and believes that in this way the architect may avoid many complex problems that come from allowing precedent to control his work. With the utmost faith in his conclusions Mr. Maher would have the student of architecture taught in the schools to develop a rational individuality in design. In the present training he sees not enough encouragement in this direction. The student is taught to rely too much upon the past. He should be directed not only to study history and the essentials of architectural training but to examine into the conditions of life around him and seek to express in his work the present rather than to copy the past. Books and photographs should not be his sole equipment for designing. Mr. Maher claims no especial originality in his views; rather he has striven to crystalize the spirit of progression of which he sees much indication, especially in the West.

Street Projections for Architectural Effect.

Among the subjects that have come to the front for consideration in connection with the right for a new charter granted to Chicago is the revision of the building code. It is believed that many of the provisions of this code will depend upon the recommendations made by the architects of the city. This subject accordingly has been under consideration for several weeks by the architectural associations. A joint committee of the Illinois Chapter, A. I. A., and the Chicago Architects' Business Association was charged with determining the wishes of the architects and formulating the recommendations. The committee has decided upon some radical provisions governing the esthetics of commercial buildings. These have been carefully considered by the associations and practically accepted by them. In this the Chapter took the lead and the Business Association graciously acquiesced, on the ground that the former body stood for the esthetics of the profession. The recommendations are in effect that no projections in commercial structures should be allowed beyond the lot line that would give the owner additional space for revenue. This limits the possible projections to those desirable for architectural effect. The projections beyond the lot limit that are favored are for a water-table of four-inch extension and two feet width, string and sill courses, commencing at the lintel of the first story openings, not more than two courses to a story, and cornice extensions.

Cornices are allowed a projection not to exceed thirty-six inches. In streets of less width than sixty-six feet the cornice extension is to be reduced by one-half inch for each foot of decrease in the width of street, until the minimum of six inches allowed is reached. The Supreme Court has rendered a decision that no individual has a legal right to excavate beyond the lot line, and that a city can not grant the privilege to make such excavation nor collect rent for space so obtained. In view of this opinion the Illinois Chapter very properly favors a recommendation that no excavation beyond the limit of the lot be allowed except for supporting foundations. This, it is thought, will meet with no objection. The discussions in the associations brought out much earnest and interesting expression for and against extensions beyond the lot line. Many were of the opinion that the owner should in all cases set back his building as far as necessary to obtain any desired architectural effect. This position was opposed on the ground that there would result an irregularity in the street line that would be unfortunate from an esthetic point of view. Most regarded that projections so improved the appearance of a street that they should be allowed in moderation beyond the lot line at a height not to interfere with the free use of the sidewalk. The conclusions reached by the architects as here given are so reasonable, so considerate of the rights of the public, and the influence of the associations in architectural questions is so potent that there seems to be little doubt that their suggestions will be incorporated in the new charter.

Newspaper Credit to Architects.

Several of the recent replies to our circular, "Honor to Whom Honor Is Due," suggest an important phase of the subject. These correspondents believe that the signing of buildings by the architects would direct the attention of the newspapers to the designers, and proper credit be given them. It is a lamentable fact that at present comparatively few newspapers mention the architect's name in connection with the buildings illustrated and described. Probably there is no deliberate intention on the part of the papers to ignore the architect. They have no just appreciation of the artistic side of the profession of architecture, and are likely to class the architect with the contractor. With a permanent tablet on the building, bearing the architect's name, he is more likely to be mentioned in any description given, and more general credit be accorded him. Further suggestions are invited.

THE OLD CALIFORNIA MISSIONS AND THEIR INFLUENCE ON MODERN DESIGN

BY W. L. B. JENNEY, ARCHITECT

LATER the churches were often built in a much more substantial manner of cut stone and mortar with good buttresses.

From necessity the missions architecturally are very simple, while those of the Spanish Colonial in Mexico

CATHEDRAL OF CHIHUAHUA, MEXICO.

were exceedingly rich in decoration, often too much so. (See the Chihuahua, the best specimen, I think, in Mexico.) In the mission church the small amount of decoration used was usually confined to the sky line of the gable end, to the principal entrance and the architectural features of the tower, which usually had two rather low upper stories provided for bells, roofed by a dome, surmounted by a small temple like finial. The architectural details were usually of Doric Renaissance. The sky lines of the gable recall somewhat the Elizabethan. There is often a cloister of considerable dimension, sometimes, as at Santa Barbara, planted as a garden. The walls are often strengthened by buttresses

CATHEDRAL, LOS ANGELES, CAL., MAGINNIS, WALSH & SULLIVAN, ARCHITECTS.

The characteristic features of the mission buildings and the mission style when adapted to modern work, of which I have given numerous examples, the traditions

THUMBNAIL SKETCH, HOUSE OF MRS. HOLLENBECK, LOS ANGELES
MORGAN & WALLS, ARCHITECTS.

of the missions preserved in our modern designs, are in large part principles rather than the reproduction of architectural features. It is true that one often sees that striking gable end cut in a stereotyped meaningless sky

CHURCH, LOS ANGELES, MAGINNIS, WALSH & SULLIVAN, ARCHITECTS.

line, the use of which is, as I heard remarked, rather the abuse than the adaptation of the mission style. There are other architectural features that are more sensible that seem to mark the style—such as simplicity with good proportions, broad projections to the tile roof, corridors, verandas or arcades—a court yard, often planted as a garden.

Sometimes one sees the mission like tower and buttresses and a Doric doorway. Then again one sees a design that suggests to the mind the mission style without there being apparently any special reason.

OLD ANNAPOLIS.

BY JOSIAS PENNINGTON, ARCHITECT.

IN THE old city of Annapolis, where transpired so many of the historic events of the early days of our republic, is located the United States Naval Academy.

In Annapolis is also located the old State Capitol building of Maryland, which was constructed in our colonial days, having the unique distinction of being the only one of the old state capitols erected before the Revolution and still used for its original purposes, furnishing accommodation for the executive department and the state legislature.

The first state house of Maryland, built in Annapolis, was erected on the present site in 1697. This building was destroyed by fire and promptly rebuilt, continuing in use until 1769, when the general assembly of Maryland appropriated £7,500 to build a new state house on the old site; therefore, the old house was destroyed, and on the old site, March 23, 1772, General Eden of Maryland laid the cornerstone of the present building, which was completed in 1773 except the dome which was not finished until after the Revolutionary war in 1793.

To meet the growing requirements of the state administrations various changes and additions were made in connection with the old house during the past century. In 1876 the most radical of these were carried out which resulted in completely removing all the inside finish of the old original senate chamber. This was accomplished against the urgent protests of many persons and the various patriotic societies. The feeling was so strong that efforts were made before each of the succeeding meetings of the legislature, looking to the restoration of this old senate chamber to its original design.

It was in this room that so many of the events took place in connection with the formation of our republic. Here General Washington on the 23d of December, 1783, resigned his commission as commander-in-chief of the American army. This incident is shown in the Trumbull painting, which hangs in the rotunda of the Capitol at Washington. Here also was the treaty of peace with Great Britain ratified January 14, 1784, and on September 11, 1786, delegates from six states met in this room and arranged for calling the federal constitution convention of that year.

Owing to the limited accommodations and insufficient committee rooms, the legislature of 1902 appointed a special building commission to construct an annex to the state house which should contain sufficient and modern accommodations for the executive offices and legislature of the State.

This work was placed in charge of Baldwin & Pennington, architects, they having just finished the new Court of Appeals building for the State, located on the opposite side of the Statehouse circle. This appointment of the architects was the result of extensive competition for the State building. The annex building is of simple design, to carry out the general character of the old building, which is the type of the early Georgian period. The new building is of fireproof construction.

In 1904 the Hon. Edwin Warfield, assuming the office of governor, became chairman of the building commission. Owing to the interest taken by him in all historical matters in connection with the State, he at once took up the question of the restoration of the old senate chamber to its original design and appointed a special advisory committee to act in connection with the architects to accomplish this object. This commission consisted of representatives of the various patriotic and historical societies of the State. The work has now been accomplished and pronounced by those best able to judge a correct reproduction of the old work. This was accomplished by diligent search, which enabled the architects to find various parts of the old work scattered throughout the State.

In the land office was found a piece of plaster from the pediment of the gallery, on which was found painted the original color of the room. One of the columns of the gallery was found in a cellar; also the old mahogany desk used by the president was found in a cellar in an abandoned condition. In this way various articles were recovered which enabled the restoration of the room, where is now to be seen the old gallery, the restoration of the president's rostrum, the large fireplace, the president's chair, the clerk's desk and other details as represented in the painting of Trumbull, before mentioned.

The work of the State of Maryland at Annapolis is illustrated by eight views in this number: No. 1 shows a front view of the old Statehouse with the original dome and cupola. The brick were made special to match those made at Annapolis from English patterns in 1769.

No. 2 represents the front views of the annex building exactly opposite to the front of the old building, the two entrances being connected by a corridor through the building thirty feet in width.

No. 3 represents an interior view of this corridor. The first door to the right is the entrance to the old senate chamber, over which hangs the portrait of Charles Carroll, of Carrollton, signer of the Declaration of Independence. On the floor is a bronze bust of Admiral Winfield Scott Schley, recently made by the sculptor, Ephraim Keyser.

No. 4 is an interior view of the old senate chamber, showing the rostrum as restored with the old president's chair.

No. 5 is a view of the opposite side of the same room, showing the gallery, the old chandelier, the fireplace, over which is a portrait of General Washington. The entrance to the gallery is by a stairway in the adjoining room.

No. 6 is an interior view showing the house of delegates.

No. 7 is a view of the new Court of Appeals building, facing the new entrance of the Statehouse on one side and the executive mansion on the other.

No. 8 is an interior view of the Court of Appeals building. This shows the Italian marble columns taken from the old Custom House building in Baltimore, these having been presented by the United States Government to the State of Maryland when the old Custom House was destroyed to make room for the new building now being erected. These buildings compose a very interesting group, and with the work now being erected at the Naval Academy and the many old dwellings erected in the colonial days, make Annapolis well worthy of a special visit.

REQUIREMENTS OF FIRE PROOF CONSTRUCTION.

BY F. W. FITZPATRICK, ARCHITECT.

IT certainly behooves us, all those interested in good building, the real progress of the nation, all the pro bono publicos, so to speak, to redouble our efforts in behalf of sound construction and by preachment, example and precept give ample demonstration to all who have eyes and can see that it is the wisest economy, personal interest and the civic duty of every man to build of non-inflammable, or, better still, absolutely fireproof construction. To fully comply with that requirement a building must be not only of fireproof material as far as its structure is concerned but its finish, its details, must be as non-combustible as possible, and its design, plan and arrangement, so intelligently devised and correct that a fire, starting in any part of the building will be confined to that starting point, thus saving not only the building but the major portion of the contents.

Just the one detail of inclosing stair and elevator wells, isolating them, or rather, story from story, would spell safety to thousands of lives and millions of property. Think of it! Seventy per cent of the loss by fire in big buildings is directly attributable to the open stairs and elevator shafts, while eighty per cent of the loss of life in buildings ensues from that same cause. It is not worth while separating or closing off elevators and stairs? And then the unprotected windows. A large per cent of all our fire loss is directly traceable to communication of fire by unprotected windows on narrow streets, alleys and abutting property. A few fire-shutters, a little wired glass or an ounce of other prevention would have been worth the millions of pounds we spend in the not always effectual water-*cure*.

To sum up, let me quote you a few words from a high authority on fireproof construction. His "shoulds" are tersely put, concise, and well worth reading by all who intend to invest in construction. And, by the way, even our architects, who supposedly know all this and much more, may be benefited by not only reading what he has to say but by thoroughly assimilating it and learning it by heart.

"Instances are so numerous of destructive fires in supposedly fireproof buildings that many persons have absorbed the idea that there is no such thing as a building that will not burn.

"This error is entirely due to a confusion of the use of terms and the misstatement of facts.

"A building that is of *non-combustible* materials is not fireproof.

"A building that is of fireproof materials, but not of fireproof design is not *fireproof*.

"A building that is not of fireproof construction and design, *except in part,* is not fireproof.

"A building that is strictly, thoroughly fireproof, filled with combustible contents may have a destructive fire *in it,* but the building itself will not be wrecked or destroyed.

"Experience has demonstrated again and again that if a building is of strictly fireproof materials—is correctly designed—only a small proportion of the contents can be destroyed by fire.

"The first great principle of fireproof construction is *isolation.*

"Suppose you wanted to erect a six-story fireproof building, but instead, having plenty of land upon which to spread out, you put up six one-story buildings, each separated from the other with thoroughly fireproof walls and partitions.

"Fill your six buildings with combustible contents, start a fire in one and let it burn itself out. Your five other buildings will not be endangered, harmed or damaged. The contents of the building fired will be destroyed, but the building itself stands intact and with slight repairs is again ready for occupancy.

"Now assemble your six buildings on one site in six stories; your floors are fireproof as well as your partitions; a fire is started in the contents of one floor—the principle of isolation protects the contents on the other five floors just as it does in the six separate buildings.

"Now assume that when you had your six one-story buildings put up you had left combustible doors opening from one building into the other.

"Is it not evident that the fire would have swept from one to the other and destroyed the contents of all six, no matter how fireproof the structures themselves were?

"Suppose in your six-story building you leave openings of combustible material—combustible doors in partitions of the same floor, combustible open elevator shafts, machinery shafts, air vents, etc. Will not the result be the same as in the six single buildings, communicating through combustible entrances?

"This illustrates the importance of the *designing* of a fireproof building.

"The city of Philadelphia put up a half-million dollar high school building which was of thoroughly fireproof construction *clear to the roof.*

"This splendid structure was then covered with a highly combustible roof, and to cap the absurdity a tower was run up above the roof and this tower was *built entirely of wood.*

"In the spring of 1905 a fire started in the tower, destroying it and the roof, damaging in part the two upper floors of the building and causing incalculable loss in the destruction of scientific records and a heavy money loss in valuable astronomical instruments.

"And the people of the city from the mayor down were asking how could such a disastrous fire occur in a fireproof building.

"Lincoln said: 'This nation can not exist half slave and half free.'

"A building will not exist that is half fireproof and half combustible construction.

"A truly fireproof building is one that is of thoroughly fireproof construction, non-combustible finish and of correct design, so that a fire starting in any part of the building will be confined to the starting point, thus saving not only the building but the major portion of the contents.

"The correctness of this kind of construction is being constantly proven by the fires that start in fireproof buildings, and, being confined to small area, are easily extinguished and cause such slight damage that they create no attention. The world never hears of them."

THE WESTERN SPIRIT.*

BY GEORGE W. MAHER, ARCHITECT

A SUBJECT that is with us in our every day affairs, that is a part of our endeavors, influencing our daily actions for weal or for woe, would, in my mind, be one worthy of discussion, therefore it is in this train of thought that I wish to address you tonight.

We coworkers in the building of the West should be influenced, even dominated, by a spirit of action that shall produce results bespeaking of our day and generation, and to the extent that we permit ourselves to be so dominated by this spirit of progress, to that extent are we real and worthy of our calling. In the realm of architecture I would say that to solve our problems satisfactorily, it behooves us to dip deep into the currents of life around about us, feel the pulse of the times and then actually execute the ideals of the present hour, and if we do this work truthfully, intelligently, our efforts must be enduring.

Unfortunately, at the present time, this point of view is not accepted, and he who does conceive a clear and concise position on advance matters, especially in the realm of art, is often times considered impractical and visionary, a dreamer, as it were, who sees strange things, whose ideas are for naught when it comes to the actual execution of works. My purpose is to correct this prevalent opinion so far as it lies within my power.

I do not consider myself far from the truth when I make the assertion that at the present time this country is most conservative, or rather falsely conservative, in art and architecture, even more so than any other country. We find, for instance, that in Europe such seats of power as Vienna, Berlin, Paris and London are making great advancement and progress in the arts of a new order. This architecture has made wonderful strides in these old centers, although hindered at every step by precedent and tradition. The strong technical schools in these centers have also placed every possible obstacle in the path of this progress, but to no avail. The artist's spirit has prevailed, and as a result we find emanating from abroad a freshness and vigor in art matters that is truly inspiring. True, in some of these efforts the pendulum has swung too far, but in my judgment this is not a permanent fault, but is in the end conducive of great good.

When we look for an equal amount of enthusiasm and progress from the American standpoint we are prone to disappointment, especially in the Eastern portion of this country, where, due to age, culture and wealth, one would expect an art development, expressive of a new country, we find just the opposite evidences in all that we see. The reactionary spirit in architecture that prevails there today is truly lamentable; the desire to copy everything of note that has appeared from the four distant corners of the earth is all too prevalent. Each succeeding work of any importance flatly contradicts any estimation that is to be made of the art of the East as a progressive one, the excellence of material and workmanship is only to be commended. The design is non-expressive. Even the criticism that is produced in magazine and periodical by our Eastern architectural contemporaries is as dead as the buildings that they criticise.

All seem steeped in precedent—the architect, the building, the publication, and the critic. It would seem to me that from all these evidences of a peculiar conservatism that little or no hope of an expressive art can evolve from our Eastern cities, and if there is to be an art that is to indicate the trend of our national life, it must spring from the central portion of this country, or where traditional Europe has not yet laid upon us its heavy hand. I am speaking to you as a Western man, in love with my environment, my profession, and with some knowledge of the people and possibilities here in our midst and at hand. Again, I am speaking to a club that has in the past produced men who have had kindred thoughts and who have spoken to you in the same strain, and who have stamped their individuality not only upon their own community, but are reaching out for virgin fields beyond their immediate surrounding. I hope to add further encouragement in this great task, which is also yours to perform, and implore you to look to it that your high ideals are not laid low and that you mistake not the call of the West. It is for you to undertake and achieve, as well as to have ideals.

Conservatism is a term that should be well understood, for today you must choose between a true and a false conservatism. It is of false conservatism or a hindrance to a rational progress that I am most concerned. Let it be well understood that progress or a freedom from precedent does not mean a lack of knowledge of the past, for no architectural training is worth while unless rooted in a profound knowledge of that which has gone before. No one should expect to design on progressive lines who is deficient in architectural training and history. Thebes, Athens and Rome offer fruitful examples of enduring work and represent to us a heroic past. On the other hand, the merely familiarizing one's self with the form and style of architecture found in these grand ruins of antiquity is not sufficient as a training for our art. The student should reach beyond this mere detail and study well into the life preceding these buildings and that which ultimately forced these permanent evidences of their civilization into being. It would seem that the spirit which pervades these buildings is more worthy of emulation than that which is materialistic or mere brick and stone.

The spirit of this architecture of the past can ever be used advantageously and is as inspiring today as of old. The letter of this architecture is past and gone and can not be rationally resurrected. The Parthenon, for instance, expresses an achievement of an art-loving, worship-loving race, but for a modern city to make a replica of this building on its thoroughfares and dedicate it to commerce or a kindred purpose seems an example of ignorance or vandalism not expressive of our times. The great truths that lie back of the Parthenon will ever be worthy of analysis. This is immutable law and can ever be transmitted into the new. If this ethical truth was comprehended by the modern day artist results of an enduring nature would follow successively, as did the Ionic style follow the Doric, or as did the Corinthian the Ionic. Suppose the underlying law of all progress had been appreciated, would not certain groups of university build-

*Paper read before the Chicago Architectural Club. Revised by the author for publication in The Inland Architect.

ings be less expressive of mediæval castles or copies of a degenerate Gothic, and stand rather as monuments of enlightenment to our civilization? The spirit of the mediæval castle or the Gothic forms could appear in tower, battlement, or buttress, but the letter of the old embodied in these features should not be repeated.

Again, if this underlying law of all progress were assimilated, we would have fewer ancient relics on all sides inspired originally by a deep religious sentiment but now void and worthless for the purposes of their construction. I would say to you again that if we strive for the spirit of these great buildings of the past and incorporate this sentiment in our endeavors, how great would be our advancement. On the other hand, do not our present methods seem weak and bespeak ill of the mentality of our present day? True, it is that our country has been so engrossed in the working out of complex problems that it has had little time to consider those of which I am speaking. It has had little time to mold its characteristics into stone. The time has arrived when our ideals should and can be expressed, and if there is, as I contend, a hindrance of any kind, a false conservatism, then we should be made aware of such hindrance and guard well against it.

I now wish to call your attention to comparisons of the old and new or the practicability of the architecture representing the new against that which represents this so-called conservative art to assist us in forming our judgment of the merits of each. No better idea of this situation can be found than here in Chicago where the spirit of the West seems more potent than elsewhere. In the business center we find a conglomerate mass of huge structures, most of them expressing nothing worthy of the purpose intended, not even commercialism, for after all commercialism is no mean motive if expressed aright. There are, however, evidences of a marked dissimilarity in architectural thought in the buildings erected. Some of these buildings are on original lines and their duplicate can not be found anywhere.

Such buildings are highly commendable and would attract attention due to the original thought on them, and the daring of the execution. In every instance the architects of the original buildings have considered the practical situation first and the artistic afterward. This is as it should be, for a true art must follow necessity, it must always be useful. The buildings that follow precedent in many notable cases are quite unsuccessful. The wild chase to successfully combine the artistic and the practical is all too evident. Columns out of proportion to the scale of the facade, pilasters stretched and elongated, detail and ornament where it has no use and can not be seen, or if seen representing garlands of a flora belonging to the tropics. Look at any one of these buildings and ask yourselves if certain of these architectural effects are a necessity either in the direction of utility or art. Ask yourself is it possible to follow precedent and design these tall structures aright.

Perhaps it is in Chicago's suburbs where the home building is in evidence that a stronger comparison can be made between the old and the new. It is in the home that the heart of the nation is most responsive and therefore naturally subject to the most advancement. It is here that the architect receives his highest inspiration and finds the greatest motive power for beautification. If we place side by side the efforts of the so-called conservative architect with that of the modern for the decision of the public, I know the judgment would be pronouncedly in favor of the new. This is a foregone conclusion since any art that is truly expressive must appeal to the living and to the ideals of the present. This living sentiment in the design, which vibrates through every detail and proportion of it can be termed "home," and the occupant can love his home, since it is a part of himself, inspired by him, and is therefore related to his own individuality.

The creation of a conservative art, on the other hand, follows exactly the opposite view. If he proposes, for instance, to work in a style that was evolved during the Italian Renaissance, then only the archæologist can thoroughly enjoy such a product since the ordinary man is not living the life of an Italian gentleman during the sixteenth century. It does not take much grasp of mind to understand the meaning of this comparison. Suppose we follow this same theory of application into further fields of endeavor. In the designing of our government buildings, hundreds of expensive state buildings have been erected all over this broad land. So far as I am able to ascertain, almost all of them have proven failures.

It seems that these buildings are absolutely out of touch, not only with the practical situation, but also with the spirit of rational design. The officials who are compelled to work in these antiquated domed templed, column supported edifices, complain not only of their unattractiveness, lack of proportion, etc., but rave at the dogma that compels such expensive edifices to be erected so impracticably under the dictum of style and precedent. If a spirit of modernism could find its way into our government buildings, and men imbued with the right spirit, expressive of ideals, be found to design them, what an evolution it would be to the people at large and what rationalism. True, there are few men as yet able to carry this theory into actual practice, but the day is past and gone when it can be said that there are no such men equal to this task.

Our church architecture bespeaks of a false conservatism. Instead of the architect designing buildings that should respond to the people who attend services of worship, educated in our enlightened age, free from mysticism and mediævalism, we find buildings erected with the gloom of the past enshrouding them, with deceits of all kinds pasted against them, bringing forcibly to the mind the letter of the past and not the spirit. If the architect would only see his opportunity to express in church building the present day theme, he might tend to hasten a form of structure where nobility, where toleration and truth were the motive powers. I might mention in this connection that almost all of the great edifices of the past were erected for the purpose of worship. The temple of the Egyptian, Greek and Roman, the beautiful cathedral of the Goth, all attest to the deep religious sentiment of these people, but the specific form of these past religions is dead and gone, never to be resurrected, then why continue to erect buildings of a nature obsolete? Is not this a false conservatism that repeats the letter and not the spirit of the past?

It would seem that a great opportunity awaits our generation in the beautifying of our capital, Washington, where the ideals of a nation might be expressed, making it beautiful as well as responsive to the American citizen. This scheme should be so broad and

comprehensive that it would take the skill of our most original and brilliant thinkers, so that when completed, the effects produced would be as akin to the sentiment of our nation as is the Trafalgar Square to England or the Place de la Concord to France or the San Marco to Venice. It certainly should not be said of Washington that any landscape effects there produced were taken from piazzas or public squares of Europe. It must not be said by posterity that our present day artists were unequal to the task of evolving a national scheme of landscape work breathing of democracy in its effect upon the people.

Too much praise can not be given the promoters and designers of our late vast expositions erected by the public to the glory of progress and achievement. In the realm of enterprise these expositions were immensely grand and beneficial, surpassing anything the world has thus far produced. The interior of these buildings although of a temporary character indicated great engineering ability. From the architectural point of view, however, as applied to the exterior, these buildings, taking a broad point of view, were not altogether successful. I qualify this statement by saying they were inexpressive of the purpose intended. They were in many instances noble examples of the architectural art. The glory of the past was most illustriously shown in column, cornice and statuary. A grandeur was there that will ever live in the memory of the beholder.

Howbeit the successful expositions of the future will not follow these examples. Buildings that are designed to house exhibits of a nation must be typical of the purpose intended so that from viewing the exterior, one is reminded instantly of the true intent and purpose of the edifice, and like the beautiful Transportation building at our late Chicago exposition, will express the meaning of its creation. Is this not the educational intent of our expositions? To show our progress in architecture as well as in our manufacture or our commerce? Are not buildings that are expressive of a living truth more noble than those resurrected from the hoary past? Should we not in our endeavors appeal to the mind rather than to the senses?

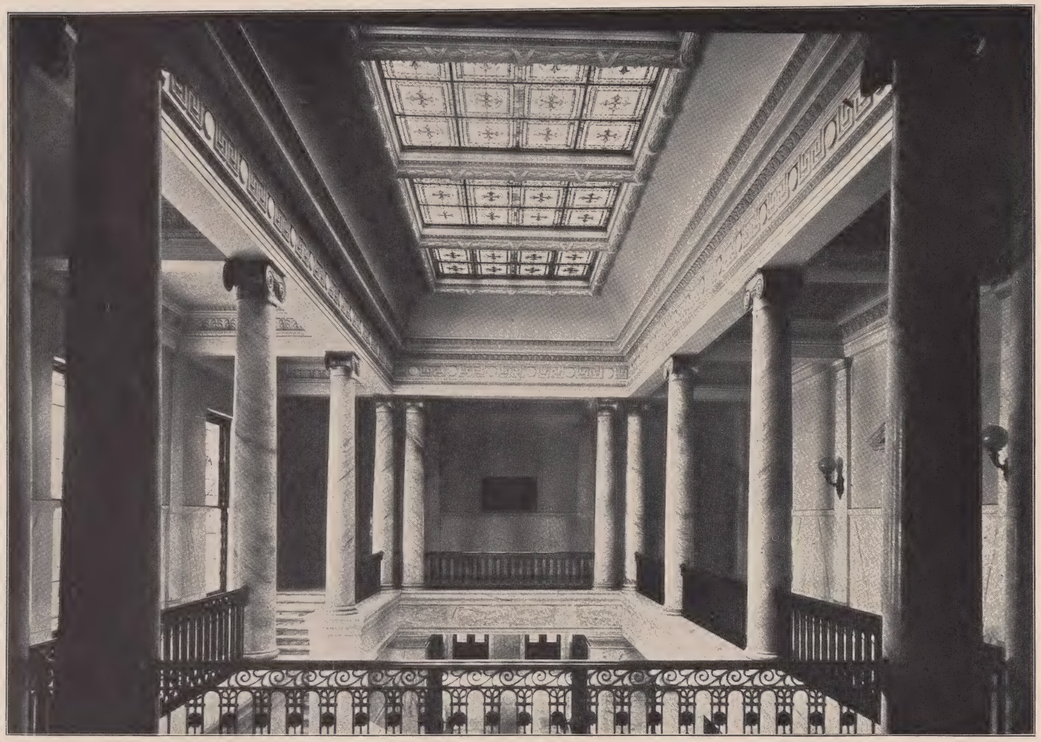
What means the Doric, the Ionic, or the Corinthian intrinsically except that they indicate a devotion to high ideals on the part of those who originated them. The detail of the classic school, the Acanthus leaf, the egg and dart, etc., are as Greek to the ordinary man, the unknowable. He admires them unintelligently, his sentiments do not reach out toward this form of expression. Must it be said that the nature which surrounds us is unworthy of art expression? That the men and women we meet must admire the Greek leafage and flora and not the flower of our fields? Does nature around us ape that of the Greek or Goth, is not our landscape beautiful, grand beyond expression?

You may force for a period certain minds of a nation into a false appreciation of foreign beauty, but there is little reason to hope from a philosophical point of view that this appreciation will be permanent. The reactionary spirit will ever assert itself as it has time and again showing conclusively that a people will always reach out for an expression all its own. There courses in the veins of the average American citizen a northern sentiment, a northern blood. His ancestry came from a far different clime than that of Egypt or of Greece. Now, back of all achievement is life and this is what will be expressed in the end. It has been said that our modern civilization is two-thirds Greek in sentiment. I hardly think this is a fair statement, for aside from race conditions, which I have already mentioned, our point of view in every instance differs materially from the Greek.

Our main glory is to foster the individual, this eventually emerges into a strong nationality, but the individual is pre-eminent. As I understand it the Greek democracy was of the aristocracy, the Greek enslaved. His workmen were not all freemen. With us the individual is permitted to work out his destiny in fear and trembling, unassisted, but free. The Greek's task was given him and he was supposed to work it out methodically or machine-like. The Greek's evolution, unlike ours, was influenced mightily by war or conquest or leadership. The battle of Marathon, for instance, had much to do with Greek progress, both in art and life. The dominating influence of a great leader like Pericles stimulated progress so long as he lived, so long as he dictated. The modern mind would not live in the plane of the Greek. It would seem too limited, too technical, too mechanical, too devoid of color. Every day like the preceding one at a given task, true, attaining to certain perfection, but at the expense of the individual. The range of Greek life did not fill the being and after fruition it passed away.

Our democracy exalts the individual and if I understand the spirit of the West, it proposes that the individual shall express his ideals and will encourage him so to do irrespective of any dictum, irrespective of any fault or failure on his part so long as it is an honest effort. I repeat that here in the West the tide of any false conservatism will be turned, that here will originate a new school of architecture which will grow stronger each succeeding generation until all the life assimilated in this new country will find full expression in marble and stone. Already the men who are fostering this new architecture and this new movement are gaining recruits and a broader range in their influence is being felt daily. It can no longer be said that the architect who follows the new does so at the peril of losing patronage. The young architect in our city who will grow in favor is he who embraces this new art. Recognition comes to him alike from the people, from the press and in publication. If an exhibition was held in these rooms tonight of the work done by these young men and placed against the work executed by the so-called conservative men, you would find that most interest and enthusiasm would be centered in the work favoring the most progress. We do not stop to consider how virile is this new art and to what extent it is attracting attention, not only in our own country, but in Europe. Viewing the situation from abroad, they understand full well that a new expression of art must come from this country an expression born of a democracy where the effort is not hindered to any extent by precedent or tradition, here *ought* to be unfettered opportunity for an expression of the new. Further, you will find that the opinion abroad is pronounced that this new art will evolve and gather headway in the central West, and even at the present time they are publishing such examples of this art from the West.

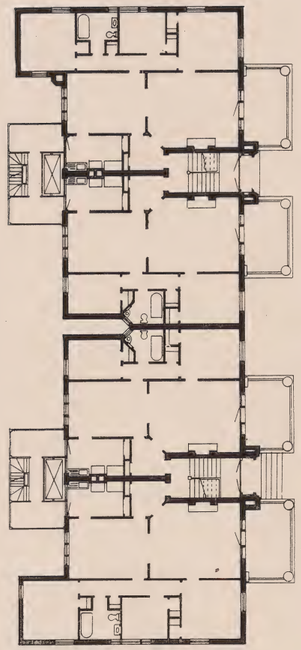
Much could be said in this connection explaining theories of design that would be of interest to the student. Some are working on the motive and ryhthm theme, understanding that nature and music are phases of inspiration to be formed into the concrete and with the

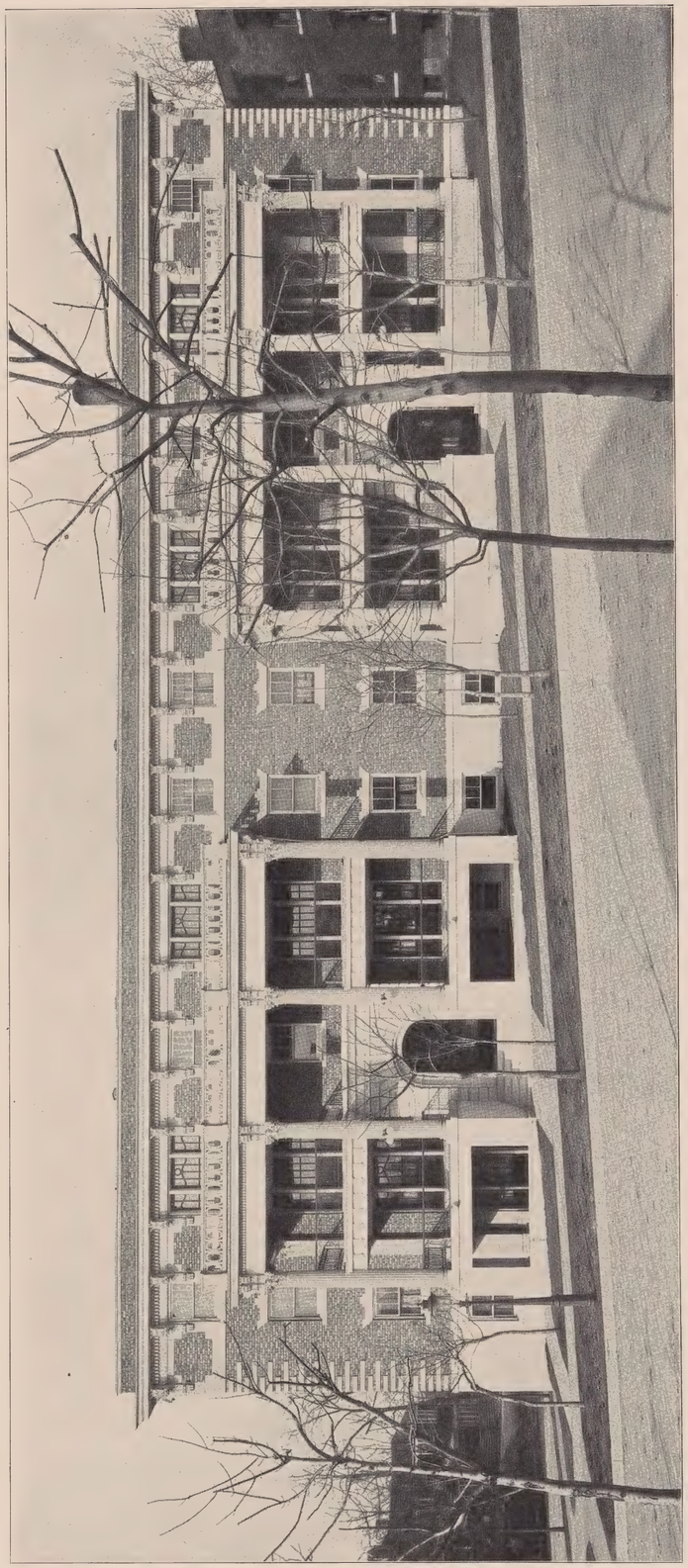


INTERIOR VIEW.

COURT OF APPEALS BUILDING, ANNAPOLIS, MD.

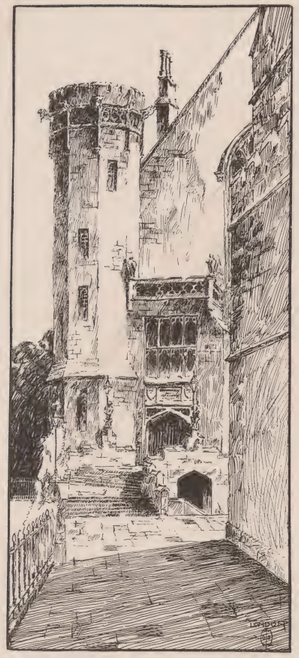
Baldwin & Pennington, Architects, Baltimore.





APARTMENT BUILDING, KANSAS CITY, MO.

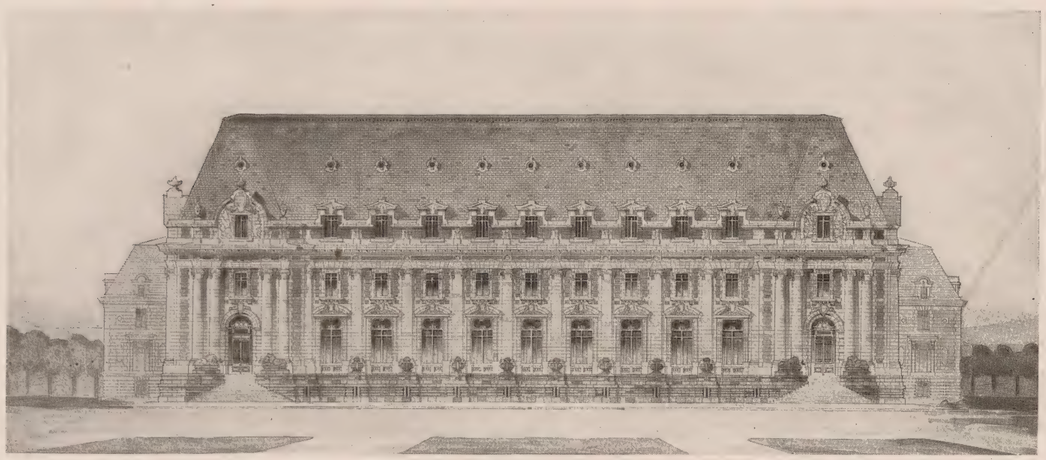
Edwards & Sunderland, Architects.



CHAPEL—INNS OF COURT. M. M. LEVINGS, DEL.

SELECTIONS
FROM EXHIBITION,
CHICAGO
ARCHITECTURAL CLUB.

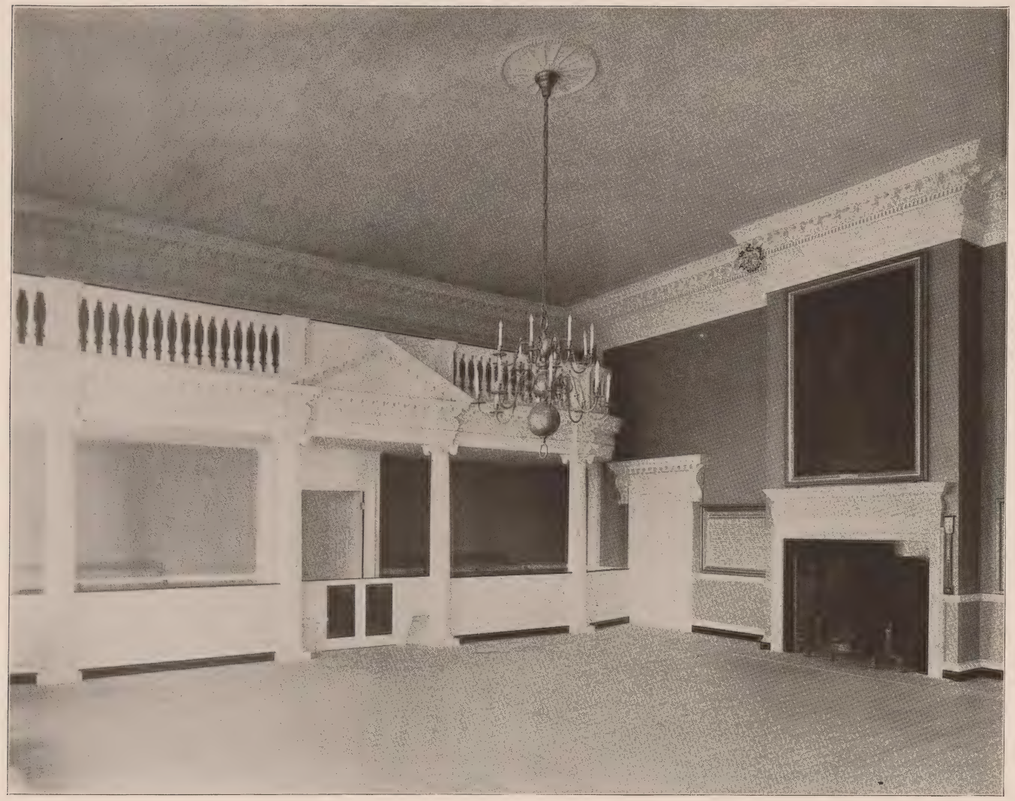
SKETCH—CHARLES A. PHILLIPS, CHICAGO.



STUDY, RESIDENCE FOR AN AMBASSADOR. BY ROBERT NORTH, CORNELL UNIVERSITY.

WESTCHESTER COUNTY COURT HOUSE. LORD & HEWLETT, ARCHITECTS, NEW YORK.

ANNEX, CHICAGO ATHLETIC CLUB.
RICHARD E. SCHMIDT, ARCHITECT.



VIEW OF ENTRANCE AND GALLERY WITH OLD FIREPLACE, OLD SENATE CHAMBER, AS RESTORED.

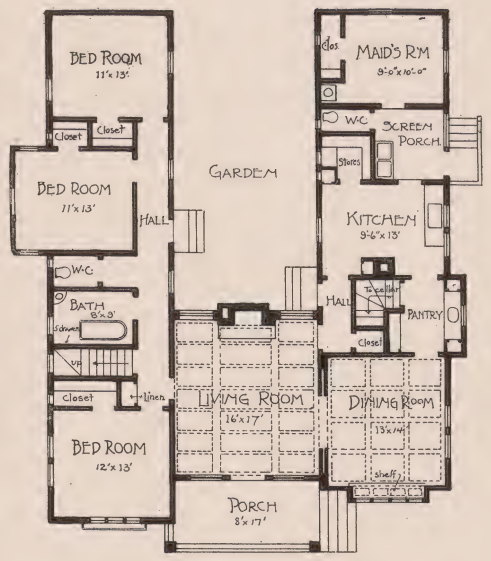
PRESIDENT'S ROSTRUM, OLD SENATE CHAMBER, AS RESTORED.

OLD BUILDING, SHOWING NEW ANNEX IN REAR.

CORRIDOR, OLD BUILDING, VIEW TOWARDS NEW ANNEX.

VIEWS OF STATE HOUSE, ANNAPOLIS, MD.

ENLARGING AND RESTORING BY BALDWIN & PENNINGTON, ARCHITECTS, BALTIMORE, MD.



FLOOR · PLAN -

RESIDENCE OF BENJ. FOLSOM, PASADENA, CAL.

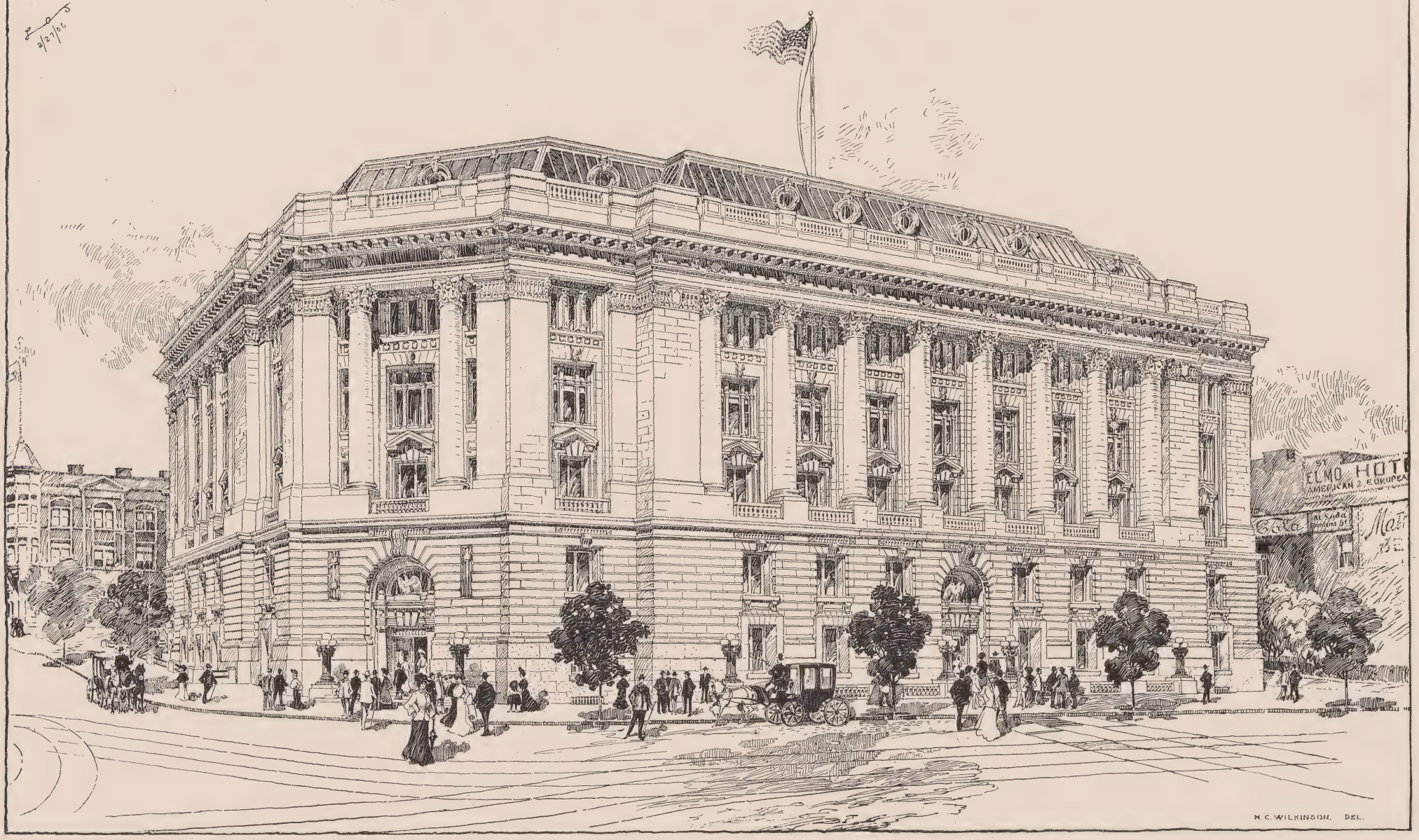
J. J. BLICK, ARCHITECT.

U · S · COURT HOUSE · POST OFFICE · ETC.

LOS · ANGELES CALIFORNIA

JAMES KNOX TAYLOR — SUPERVISING ARCHITECT.

2/27/06

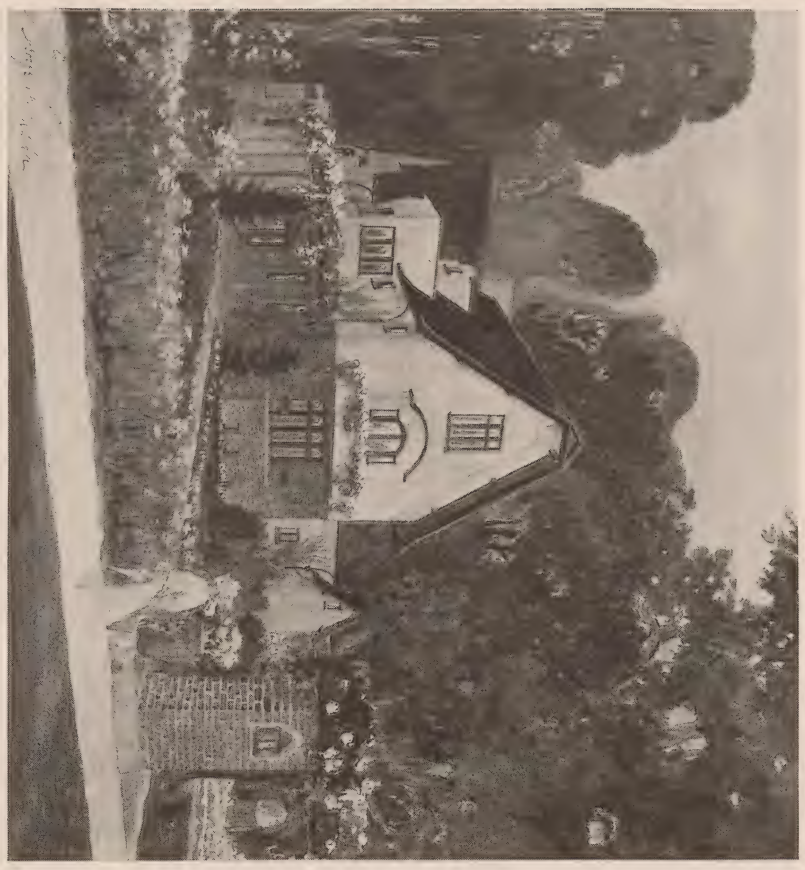


A BLOCK OF STORES AND OFFICES IN A COUNTRY TOWN.

HUGH M. G. GARDEN, ARCHITECT.

RESIDENCE, LAKE GENEVA, WIS.

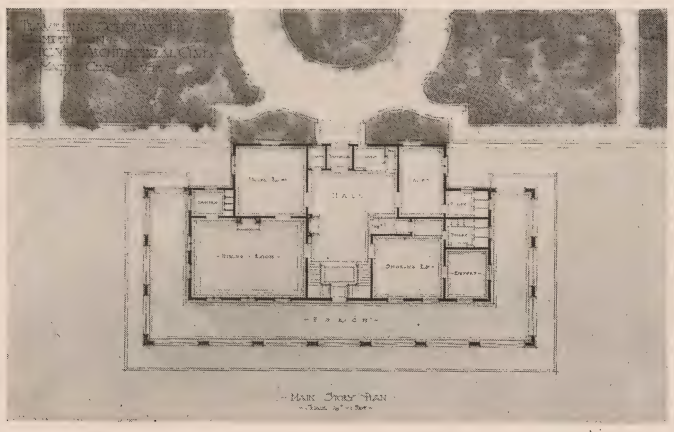
RICHARD E. SCHMIDT, ARCHITECT.



RESIDENCE OF FRANCIS LACKNER, KENILWORTH, ILL.

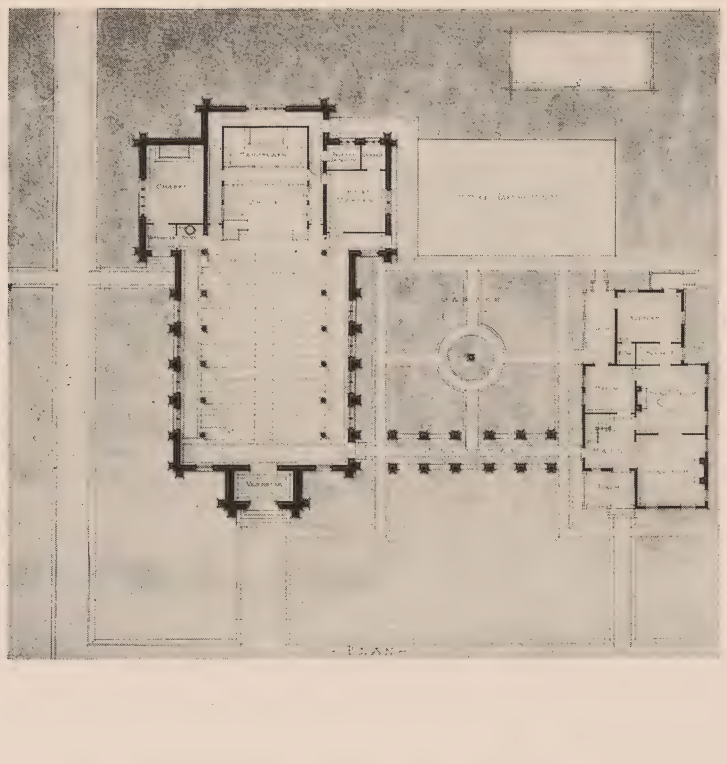
GEORGE W. MAHER, ARCHITECT.

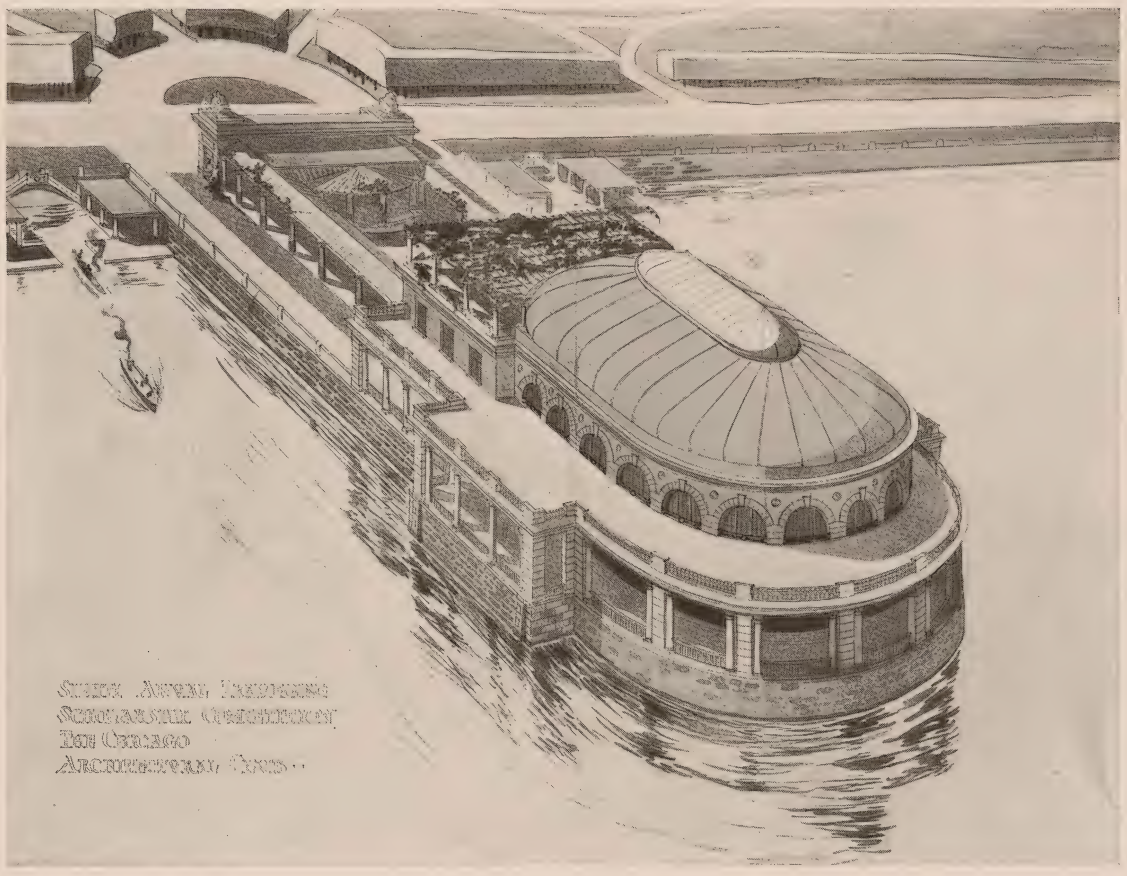
WATER ELEVATION.



A YACHT CLUB HOUSE FOR GRANT PARK.

PARK ELEVATION.





A RECREATION PIER FOR A PUBLIC PARK.

FRONT ELEVATION

SELECTIONS FROM EXHIBITION, CHICAGO ARCHITECTURAL CLUB.

AN EPISCOPAL CHURCH.

SUCCESSFUL DESIGNS, SIXTH ANNUAL TRAVELING SCHOLARSHIP COMPETITION, CHICAGO ARCHITECTURAL CLUB. SUBMITTED BY HERBERT H. GREEN.

VIEW IN DINING ROOM, RESIDENCE OF MR. PARMERLEE.

GEORGE W. MAHER, ARCHITECT.

RESIDENCE OF C. K. PARMERLEE, KENILWORTH, ILL.

GEORGE W. MAHER, ARCHITECT.

VIEW OF ALTAR AND REREDOS, GRACE MEMORIAL CHAPEL, CHICAGO.

Cram, Goodhue & Ferguson, Architects.

VIEW IN ROTUNDA, CHICAGO POST OFFICE.

Henry Ives Cobb, Architect.

PAVILION, TEACHERS' COLLEGE, ST. LOUIS, MO.

WM. B. ITTNER, ARCHITECT.

RESIDENCE OF E. J. BAKER, KENILWORTH, ILL.

George W. Maher, Architect.

INTERIOR VIEW, GRACE MEMORIAL CHAPEL, CHICAGO.

Cram, Goodhue & Ferguson, Architects.

GRACE MEMORIAL CHAPEL, CHICAGO.

Cram, Goodhue & Ferguson, Architects.

ANNEX TO OLD STATE HOUSE, ANNAPOLIS, MD.

Baldwin & Pennington, Architects.

VIEW IN HOUSE OF DELEGATES, STATE HOUSE, ANNAPOLIS, MD.

Baldwin & Pennington, Architects.

real living motive that of surrounding life, the production of great works of art, should be forthcoming. It is no longer necessary for any school or student to rely only on precedent for the teaching of architecture since all around us is motive power, nature, music, life. It is unfortunate that there is no text book as yet compiled that would give the technical schools foundation for the instruction of this new theory, however, certain buildings are already in evidence and more of them will soon be erected and eventually will come the professor and the book.

I will close by stating that wherever in the history of the past we have found great achievement in whatsoever line of endeavor, there it is that men lived who heeded well the spirit of their times and who drank deeply from the inspiration of the life which surrounded them and who did not in any manner strive to conceal that life, humble and ordinary though it may have been, but whose strong conviction was to live honestly and truthfully, painting as it were a living portrait, giving full expression to what they saw. Ever will men of this type be benefactors to the world and if you men here tonight heed this truth, go to your task and express to your best ability the spirit and life which surround you. Rest assured that no greater boon is yours to perform and that there is no greater compensation due man than that which comes from the execution of a strong and righteous conviction.

MUNICIPAL IMPROVEMENTS.

BY ALBERT KELSEY, ARCHITECT

CHAIRMAN OF COMMITTEE OF EXPERTS OF THE ART FEDERATION OF PHILADELPHIA

PART VIII—TERMINALS, CONTINUED

ONE of the most notable examples in this country is now forging ahead with five blocks of water front on the Kills, nine blocks of water front on the East River in New York, and so much of East One Hundred and Twenty-ninth street to East One Hundred and Thirty-first street as is on the railroad tracks has been closed and wiped off the map, while four so-called avenues south of One Hundred and Thirty-second street have also gone. This immense freight terminal, known as Port Morris, has a great market for one of its accessories. In St. Louis the freight problem has been worked out on different lines, though in an equally modern and satisfactory manner. An unusual number of railways focus there, making of the city a great distributing point. In order to minimize the cost and inconvenience of drayage through the streets from one station to another a central freight district has been established and a series of freight houses (the Cupples Warehouses) have been erected, which have proven of as great advantage to shippers as it has proven profitable as a private investment. And unlike the St. Louis union station, it is an unqualified success, while the former is sometimes pointed to as a mistake from a local standpoint, in that it provides such a quick and convenient changing place that passengers now hurry through who formerly stopped in the city and there transacted business which is now transacted at their place of final destination. The trolley terminal is a real menace. It menaces our towns and cities as the railroad once did, when allowed to run trains unprotected in the open streets; and even more so since at least the railroads always owned their depots. It has required more than a generation to elevate, depress and tunnel some of the railroads in our best disciplined cities, while in others the work is only starting. It has required endless legislation and enormous expense to partially overcome this usurpation, and moreover every one recognizes that the harm done by lawless railway extension can never be fully remedied. Private car barns are not trolley terminals; they are to the trolley car what the roundhouse is to the locomotive, while the locomotive when attached to its train has also its own siding or train shed, detached from the street system and privately owned. The trolley, on the other hand, usurps the thoroughfare for both its right of way and for its stations. Until the ever increasing radius of this type of transportation began to compete with the railroads, the cars were small and in themselves no more objectionable than the old horse cars, but with increasing popularity the interurban trolley not only entered into competition with long distance railroads, but its cars began to compete in size and equipment with those on the steam roads, and now monopolize streets which were designed only for the movement of light trackless vehicles.

SKETCH BY C. F. EPPINGHAUSEN.

(To be continued.)

SANITARY ENGINEERING IN THE MODERN OFFICE BUILDING

BY J. PICKERING PUTNAM, ARCHITECT

PART IX

THUS the trap shown in Fig. 29 retards the flow more than that shown in Fig. 28, and the opportunities for sediment deposit are greater in the former than in the later. We also made experiments on horizontal traps with various combinations of curved and straight partitions. They showed about the same power of resistance as the traps having all rectangular partitions, but were, for the same reasons, subject to the same defects we have described.

These defects can be obviated by taking advantage of the principle of centrifugal force. Accordingly the next step consisted in constructing the partition in the form of a spiral, as shown in perspective in Fig. 32 and in plan in Fig. 33.

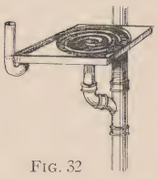


Fig. 32

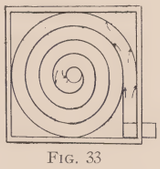


Fig. 33

By this improvement we have attained a form which combines the advantage of all the preceding ones and eliminates completely their defects. We can reduce the horizontal dimensions as much as before without destroying the power of the trap to withstand the severest tests of siphonage.

We have done away with the comparatively clumsy method of using abrupt turns and baffle walls to separate the air from the water when siphoning action takes place and have substituted for it the simpler and more scientific and effective agency of centrifugal force.

Air under powerful siphonage rushes through the trap with tremendous speed, causing some of the water in the reservoir to whirl round with the air like a miniature whirlpool and cyclone. The water, being the heavier of the two elements, is thrown outward by its spiral movement against the outer walls of the partition, while the air hugs the inner walls because along them lies the quickest and easiest outlet to the drain pipe where the partial vacuum to be filled by it exists.

This action of the two fluids is easily followed in our glass traps by the eye. It is made still more plainly discernible if lumps of earth, small stones, and other substances heavier than water be mixed with it. These are clearly seen to hug the outer walls as they whirl around on their way to the outlet, while the air bubbles, always present in the water at the time of siphoning action, seek the inner side or more direct passage outward, which is for them the line of least resistance.

The resisting power of this trap is as great as that of any of the preceding traps, while its form permits of a much more rapid discharge than the others in proportion to the length of its waterway, and it has the maximum of scouring action, and absolutely no obstruction or baffle at any point beyond what is encountered in a perfectly straight, smooth pipe. It has a sufficient volume of water to withstand back pressure and evaporation, and the distance between the trap proper and the drain outlet is sufficient to obviate any harm from capillary action.

(To be continued.)

THE PLANNING OF HOSPITALS

BY T. M. CLARK, ARCHITECT

PART VII

EXPERIMENT shows that in cold weather ground air presses from the outside into the cellar of a warm building, and such air, in the neighborhood of hospitals, is usually contaminated with illuminating gas from leaky pipes and vapors from sewers and cesspools, which can only be kept out of the wards above by free aeration. For a similar reason, many physicians think that ward buildings should be only one story high, so that air from one ward may not ascend through the floors into that above; but in modern hospitals the ventilation of the wards is so active that foul air has little chance to accumulate. If the ceilings are painted, such foul air as may reach them is effectually prevented from passing through, and in well planned city hospitals, where the superposition of wards is unavoidable, it does not appear that it is practically objectionable.

Every hospital, however small, must have an administration department, where the business of the establishment can be carried on; and in a large institution, the administration group may assume great importance and complexity. Naturally the requirements to be fulfilled in this department vary with circumstances, but in general, a hospital with ward accommodations for twenty patients, or even less, will need a building, connected with the wards only by corridors, and containing on the entrance floor, a reception room for patients, with toilet rooms for men and women not far off; a room for the house physician and a matron's office. In very small hospitals the matron is often also the steward, secretary and cashier of the establishment, so that her office is a busy place, and she should have, in addition to it, and on the same floor, if possible, a private room, with a bathroom, so that she can answer the innumerable calls upon her without running continually up and down stairs. The second story of the building can be devoted to bedrooms for the nurses, and they must have a dining room, which is often shared by the matron and the house physician. The servants should live, as far as possible, by themselves, having their own stairway, so that they may not come in contact with the hospital traffic; and, in a very small hospital, the third story of the administration building may contain their bedrooms, and also the kitchen, which answers for their dining room, and which it is now common, where compactness of arrangement is necessary, to place in the upper story, so that the smoke and smell from it may not be blown into the windows of the wards. A small laundry also may be placed in the upper story; and, with provision for heating and ventilating apparatus in the basement, such an administration building will be sufficient for a school or college infirmary, or other establishment where surgical cases are not to be provided for.

(To be continued.)

THE ELECTRIC LIGHTING OF BUILDINGS.

BY R. E. HEINE, ELECTRICAL ENGINEER.

PART I

ELECTRICAL lighting in the modern office, bank and store buildings, as applied today, occupies a distinct field of its own. It does not consist in the placing of a greater or smaller number of lights promiscuously throughout a building, but a scientific application of the various forms of the electric light in a manner to produce useful and pleasing results at a normal expenditure for both first cost and operating expense.

Before considering in detail the electric lighting of any building, or portion of the same, the form of electric light to be used, and the purposes to which it is to be applied, must be carefully considered. There are in use at present three forms of the electric light adaptable for commercial work, namely the incandescent lamp, the arc lamp and the Nernst lamp. The mercury vapor lamp is finding some adoption in special cases, but is hardly of sufficient importance to be counted as a factor in the lighting of bank, office and store buildings. Before comparing these different forms of light, a few notes regarding the system of wiring might be of advantage.

The most economical method of electric lighting, as far as the wiring only is considered, consists at the present time in the three-wire system, operated at approximately 220 volts between the outside wires. In this system the mains, feeders and sub-feeders consist of three wires, one being called the neutral and the other two the positive and negative wire, respectively, or the outside wires. The lighting load is divided into halves, connected to the two outside wires and having a common connection at the neutral. When the load is perfectly balanced, that is, when each side of the three-wire system, carries the same load, the neutral wire carries no current, and for that reason is frequently made smaller than outside wire. Even in those three-wire systems, where the amount of unbalancing is very great, the saving of copper in the mains and feeders amounts to 25 per cent over the straight two-wire system, and in the better arranged systems the saving frequently amounts to 30 and 35 per cent.

The three-wire system also possesses the advantage of permitting the operation of motors at 220 volts without affecting the balance of the system, and affording better service for motors than could be obtained on a 110 or 500-volt system. Small isolated plants for separate buildings are frequently operated at 110 volts on a two-wire system. As far as the electric lighting is concerned, this is of no moment, except that a slightly greater first cost of installation is brought about.

Five hundred volt systems for electric lighting are practically out of question today, and are resorted to only as a makeshift or in case of emergency. For the sake of safety alone they should be barred entirely for inside work.

Summing up, the most commonly used systems for electric lighting are operated at from 110 to 115 volts, and from 220 to 230 volts, the latter most generally meaning a three-wire system. Alternating and direct current can be used to equal advantage for operating incandescent and arc lamps, but for the Nernst lamp an alternating current is required to produce good results. As far as the wiring of these two systems is concerned, there is practically no difference, and the same can be said of the efficiency of operation.

(To be continued.)

JOHN DEWAR ON PREPARED PAINTS.

MR. John Dewar, of Pittsburg, is not only an ex-president of the International Association of Master House Painters and Decorators, but is also one of the most intelligent and most successful painters in the United States. His firm executes important work all over the country, and there is probably no other painter to whose judgment and discretion so many large corporations are willing to entrust their work without restrictions. Mr. Dewar writes in the *Canadian Painter and Decorator:*

"My personal experience with 'ready-mixed paints' has been very limited. Yet from that experience and observation I have no hesitancy in saying it is my opinion that they have come to stay, and in some sections they are really a necessity. It is true the average painters are prejudiced against it, as taking from them what rightfully belongs to the craft, the manipulating and mixing of their own colors; but has not that applied in the past to many of the articles entering into our business, of which today we are glad to avail ourselves, taking the manufacturers' word as to their purity and fitness; judging also as to their worth by results produced? Old prejudices are too often stumbling blocks to active progressive men of today. It is true we have various manufacturers as we have various master painters, but I am glad to know that the great majority strive for results, their aim and object being the best possible. To produce that we must of a necessity eliminate as far as possible the 'cheap ready-mixed paints' as well as the master painter whose object appears to be 'how cheap can I buy my material,' without regard to quality, the same spirit predominating in applying it. We must realize the fact that the manufacturers as a rule are in business to cater to the demands of the trade, but what I do strenuously object to is the spurious mixtures put up by unprincipled manufacturers and labeled 'pure goods.'

"I believe the up-to-date manufacturer occupies as good a position as the progressive master painter of today in determining the true value of mixed paint. They call to their aid the best chemists in their line to determine both quality and quantity of the different parts entering into the product, thereby enlisting the aid of science as well as art. You will, I am sure, agree with me that in the matter of thorough mixing, the mechanical mixer is an improvement over the apprentice and the paddle. The writer a few years ago had a large job in New York. When the question of exterior painting was up, the owner requested that I use a 'ready-mixed paint.' I demurred somewhat, as I was very much interested in the general results of the work, but after giving to understand that I would not be responsible for it, I ordered three barrels and used it on a residence, watching its application closely. I had to acknowledge the merit, and when looking the work over a year afterward I would have felt perfectly satisfied to have acknowledged it as the work of my own mixing. It all resolves itself into getting the best from the most reputable maker and in applying it in an intelligent manner."—*Drugs, Oils and Paints.*

ASSOCIATION NOTES.

BROOKLYN CHAPTER, A. I. A.

The Chapter will hold its sixth annual exhibition at the Pouch Gallery, Brooklyn, from the 7th to the 19th of May inclusive. Exhibits of drawings, photographs, sculpture and objects of industrial art are desired from all interested. In order to stimulate the artistic development of the pupils in the art schools of Brooklyn, the Chapter has instituted a competition for a cover design for the catalogue of the 1906 exhibition to be limited to the pupils of these schools only.: A prize of $25 for the first and $15 for the second best designs will be awarded to the successful competitors. In order to increase public interest

in the subject of "Good Architecture," the Chapter has instituted a competition in connection with its annual exhibition and will award a bronze medal for the photograph of the most architectural detached house located in the borough of Brooklyn. There will also be a first and second mention for those next in merit. All competitive designs for catalogue cover, drawings for illustration in the catalogue and competitive photographs for exhibition should be sent to Mr. William A. Parfitt, 26 Court street, Brooklyn, secretary of the exhibition committee, who will ception and press view on the evening of the 7th of May and the exhibition will be open to the public free from the 8th to 19th of May inclusive. A number of special occasions during the exhibition are being arranged for, of which due notice will be given later on. The last exhibition was a great success and it is hoped that the present one will be even more so, and to this end the cordial support of all interested in this subject is earnestly solicited.

ARCHITECTURAL LEAGUE OF AMERICA.

The executive board has decided to have printed 1,000 copies of the résumé of the proceedings of the New York convention. Also 1,000 copies of the constitution, and to include in the same pamphlet the code on competition. These will be sent the members of the league sometime during the month of April. The following delegates to the International Congress of Architects to be held in London in July have been elected. (Other members of the league are urged to elect their delegates at once and send the names to the corresponding secretary.) At large, E. J. Russell and N. Max Dunning.

St. Louis Architectural Club, William B. Ittner.

Washington Architectural Club, George O. Totten Jr.

Brooklyn Chapter, A. I. A., Isaac E. Ditmars.

J. P. Hynes, of Toronto, has been appointed chairman of the committee on European tours, the other members of the committee being Emil Lorch and Nicola D'Ascenzo. Albert Kelsey has been appointed chairman of the committee on foreign correspondence and has selected Max Dunning and Karl Bitter to serve with him. The following is a list of the members of the various committees so far selected:

Publicity and Promotion—John Molitor, Philadelphia, chairman; C. Horton Churchman, Alex. M. Adams and Emil Lorch.

Current Club Work—J. P. Hynes, Toronto, chairman; J. C. B. Horwood and J. M. Lyle.

Education—Newton A. Wells, Urbana, Ill., chairman; R. C. Spencer and J. W. Case.

Co-operation with the Institute—William B. Ittner, St. Louis, chairman.

Civic Improvement—Frederick S. Lamb, New York, chairman.

Foreign Scholarships—N. Max Dunning, Chicago, chairman; Hugh M. Garden and R. C. Spencer Jr.

Circuit Exhibition—Newton A. Wells, Urbana, Ill., chairman.

A preliminary competition in the foreign traveling scholarship was held on February 25th and twenty-three men entered. The final drawings are to be submited April 24th.

The final drawings in the Harvard scholarships are to be completed by April 30th and sent to William B. Ittner, corresponding secretary, Board of Education building, Ninth and Locust streets, St. Louis, Mo. The announcement of the winners will be made immediately thereafter, and the award certified by the authorities at Harvard. The school year begins September 27th.

The executive board announces that Washington University, St. Louis, has offered one scholarship for a regular student in architecture to members of the League. The value of the scholarship is $150 annually. The method of awarding the scholarship will be announced later.

CHICAGO ARCHITECTURAL CLUB.

The traveling scholarship prize of $500 was awarded to Herbert H. Green for drawings of a Gothic church, yacht club and a recreation pier. This prize will enable Mr. Green to spend six months in Europe. Second prize of honorable mention was given to Walter Parker and third to Joseph W. Wilson. There were ten competitors and the competition was open to club members only.

Among the striking features of the annual exhibition were the drawings from various architectural schools, those of Columbia University, Cornell University, the Universities of Pennsylvania and Illinois, the Massachusetts Institute of Technology, and the Chicago School of Architecture. Other exhibits were the drawings of school buildings from the board of education, the mural paintings by Mr. C. Y. Turner, of New York, the drawings sent from abroad by Charles Herrick Hammond, who was the prize winner of the traveling scholarship of last year; water-color drawings from a number of Chicago architects, and original plans of private homes and institutional and public buildings. There were nearly four hundred exhibits. The exhibition as a whole was of an unusually high average of merit. The paper for March 26 was on the "Mechanical Installation of a Building." by C. A. Chapman, M. E. On April 21 members on invitation visited the cement works at Buffington, Ind.

CHICAGO ARCHITECTS' BUSINESS ASSOCIATION.

The regular monthly meeting with dinner was held on March 27. There was extended discussion of the proposed revision of the building code of Chicago. There was the feeling that in the esthetics preference should be given to the action of the Illinois Chapter of the A. I. A. It was resolved to concur practically in the recommendations favored by the Chapter, espepecially with regard to projection of commercial buildings beyond the lot line. There appeared to be much gratification with the appointment of so competent a man as Lonsdale Green, an engineer and graduate of the Massachusetts Institute of Technology, to the position of deputy building commissioner.

OUR ILLUSTRATIONS.

Residence, Pasadena, Cal. J. J. Blick, architect.

Selections, Exhibition Chicago Architectural Club.

Annex, Chicago Athletic Club. Richard E. Schmidt, architect.

Postoffice, Los Angeles, Cal. J. Knox Taylor, supervising architect.

View in Rotunda, Chicago Postoffice. Henry Ives Cobb, architect.

Pavilion, Teachers' College, St. Louis, Mo. William B. Ittner, architect.

Residence, E. J. Baker, Kenilworth, Ill. George W. Maher, architect, Chicago.

Apartment Building, Kansas City, Mo. Edwards & Sunderland, architects.

Residence, C. K. Parmerlee, Kenilworth, Ill. George W. Maher, architect, Chicago. Interior and exterior views.

New Annex and Remodeled Old State House of Annapolis, Md. Baldwin & Pennington, architects, Baltimore, Md.

Grace Memorial Chapel, Chicago. Cram, Goodhue & Ferguson, architects. An exterior and two interior views are shown. The exterior is of stone in keeping with the church which it adjoins. The interior walls are of brick with arches, window frames, etc., of terra cotta. The building was erected by the William Mavor Company, contractors. The Lyon & Healy organ is nicely adjusted in size and tone to the chapel. In quality it is equal to the great organ furnished by them for Orchestra Hall. The organ has two manuals and pedal, with eleven speaking stops and eight couplers, together with adjustable combinations, crescendo pedal and all modern accessories. The limited space available for the organ necessitated a novel system of construction, by which the effect of an eleven-stop organ is obtained from seven sets of pipes. All of the action of the organ is contained in the key-desk, and is instantly available, since the whole exterior of the key-desk is removable. The action of the organ is electric, and the connections from the keys to the organ proper are made through a cable of 250 wires, strung inside the post at the right of the keyboard. The decoration of the chapel interior depends very largely upon the reredos and the memorial window. The reredos is of chestnut. The angels, figures and disks are symbolical of the church and its rites. The memorial window has figures embematical of Inspiration, Purity, Divinity, Devotion and the Missionary Spirit. The tracery is adorned with emblems and angles expressive of high ideals.

Technical Department

DESCRIPTION AND ILLUSTRATION IN DETAIL OF THE

VENEERED DOOR MANUFACTURING PLANT OF THE PAINE LUMBER CO., L't'd.

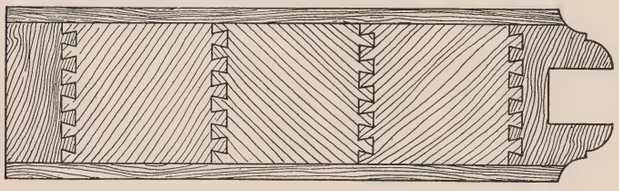
THE NEW PROCESS VENEERED DOOR

WE are in an age of steel and concrete for structural work, but even more in an age of hardwoods for interior finish. Until recently the use of hardwood has been restricted to the most expensive structures, owing to the cost feature of the hardwood door. This has now been overcome, and we take pleasure in submitting a report of our staff representative, who has just completed an exhaustive investigation of the latest and most advanced example of modern door construction, the "Korelock" door, manufactured by the Paine Lumber Company, Limited, whose main plant is at Oshkosh, Wis. As this company probably manufactures more veneered doors than all its competitors combined, its operations are of importance to the building interests.

The trademark "Korelock" is a coined word, deduced from the core construction of the door, which is original and of the best, and is well illustrated in the cross section cut shown below.

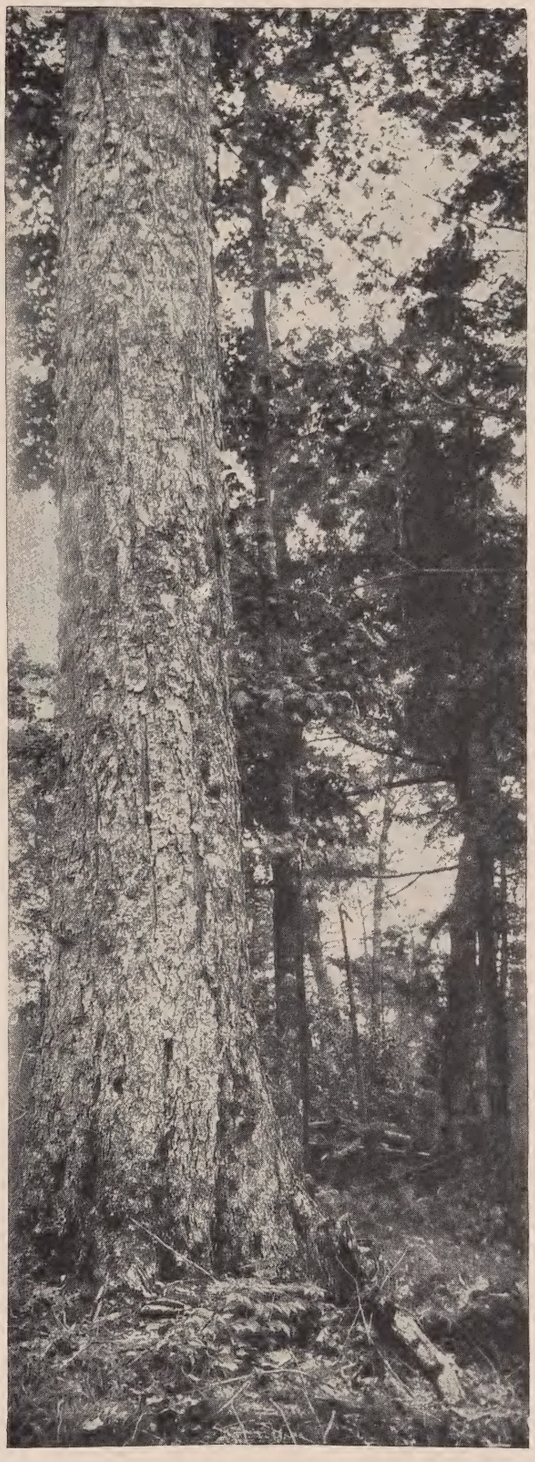
Until the advent of this door the hardwood veneered door has cost the large wholesale buyer an average price of $6.00 per door, and the small buyer or consumer relatively more.

The "Korelock" door costs the wholesale trade an average of $2.50 per door, or about 40 per cent of the former price of a veneered door. It is constructed upon scientific principles, under such conditions of high class mechanical equipment that it is admittedly the highest type of veneered door yet placed upon the market, and has been a phenomenal success from the first. The story of its construction from the lumber camps to the modern house and colossal sky-scraper should be interesting to both the architect and builder.



THE "KORELOCK"—A PERFECT CORE.

The tendency of all wood to swell, shrink or twist is a fundamental difficulty, and the primary purpose of veneering is to overcome, so far as possible, such tendencies. As the core is the foundation of the door, a perfect core is a guarantee of the whole. Experience has demonstrated that the best results are obtained by constructing a core of strips, or small pieces, thus neutralizing tendencies to warp. In the "Korelock" door these pieces are united by a dove-tailed joint in addition to the usual glued joint, the edge strips then being united to the core in a similar manner. This process is accomplished with corelocking machines developed by the manufacturers and constructed at the plant. These machines, in construction and product, are some of the finest examples of mechanical achievement in woodworking machinery, and in operation require the best of skill. They not only cut the dove-tail joint and unite the stock, but also spread the glue, which answers the double purpose of lubricating the joint as the pieces are united and finally setting the joints as the glue hardens. No machines of this character are in use in any other door plant, and are only suited to operations on a scale such as these initial machines are handling. The machines are, therefore, not likely to come into general use, not only for this reason, but owing to their great expense and the mechanical care required in their operation.



A NATIVE BIRCH TREE, DIA. 4 FT., IN FORESTS OF PAINE LUMBER CO.

A PAIR OF SPECIAL CORE-LOCKING AND GLUING MACHINES.

INTERIOR, VENEER MILL, THE DRIER.

Further details of their construction and operation will be given in response to inquiries from our readers, but present space will not permit of going further into this item, and we will pass on to the preliminaries of preparing the raw material for the machines.

The kiln drying to which the core strips are submitted is complete and handled through kilns of the most modern type. The greatest care is required in the kilning process, as it is imperative to eliminate all moisture from the core, and results have proved that in this case success is as complete as in all the other details of the door. The average dry kiln operating from the atmosphere as it varies from day to day, necessarily varies its product slightly as the outdoor atmosphere varies under weather conditions. To take care of this irregularity of nature the kiln drying process is carried on through glass condensing dry kilns, whereby the air is used continuously over and over until the stock is cured, being passed by a natural circulation through the lumber and air ducts into glass condensing towers, where a cooling process eliminates the moisture and the cold air settles and returns to its duties through air ducts for the purpose. Thus the material, when cured, is uniform in its dryness, and with no irregularity as in the ordinary kilns.

From these kilns the material passes through the cutting department of the plant, where six heavy "double surfacers" bring it to a thickness in preparation for the "rippers" and "slashers," which reduce it to the strips designed for the core-locking machines. After the cores are completed through these machines, the face veneers are applied, and here the great advantage in specializing, which is so fully acknowledged in manufacturing as well as in professional or scientific lines, is conspicuous. The old method of sawing the veneers from lumber has been abandoned, and the modern method of rotary cutting the veneer direct from the log, established.

The logging operations of the company on its own timberlands offer an opportunity for the selection of logs for the veneer mill with reference to their adaptability of fibre and grain, so that only the choicest of the logs are used in the veneer work, and those that are most desirable for door veneers. In the veneer, as in the core, all natural tendencies of wood to warp should be eradicated so far as feasible. By a boiling process of twenty-four hours the logs are properly tempered to this end, and then the rotary lathes, by shaving around the log, cross-cut the grain in such a manner as to neutralize its drawing features, and at the same time develop the figure of the wood, adding immensely to the natural beauties of the grain.

In the veneer mill, which constitutes an important section of the main plant, the advantages of applying a mechanical process exclusively to a specialty are evident. The entire veneer mill, with its full quota of foremen and employes, is concentrated on the item of veneers for door use, all of uniform fibre, thickness, size and quality.

The veneer comes from the rotary lathes in long sheets in proportion to the diameter of the log, and as illustrated in views shown herewith. These veneer sheets are carried on long aprons as they come from the lathe, to machines called "clippers," holding long horizontal knives that cut these sheets to sizes for the door plant, and cut out the defects as they appear. They are then passed to the dryers, where they are mechanically dried in from thirty to forty minutes, and, in the drying process, rolled to a polish preparing them for the high finish they are to receive on the completed door in the finishing room.

INTERIOR, VENEER MILL, LARGE LATHE,
Showing Sheet of Veneer Between Lathe and Clipper.

This feature of drying wood direct from the wet log in thirty minutes ready for gluing is perhaps one of the most sensational features of the process, and is certainly something modern in woodworking. Under old methods in vogue until recently, this stock would be seasoned for two months and then passed through hot air dry kilns, occupying an additional week's time before it would reach the condition that these drying machines produce in thirty minutes.

Two styles of drying machines are operated, one being of the "Coe" roller type, and the largest machine of its kind in the world. It is 12 feet wide by 140 feet long, with five decks, or

IN THE VENEER MILL, SORTING AND SHIPPING.

LUMBER COMING FROM SAW MILL ON SORTING CHAINS.

CAMP 10.

LOG BOOM.

STEAM LOG LOADER AT WORK.

BOILING VAT ROOM.

WEST DOCKS.

series of rollers, spaced on 8-inch centers. It is operated by an independent engine, direct connected, thus the veneers are slowly rolled once its length of 140 feet and come out dry and ready to glue. Veneers weighing 6 pounds green on entering the machine, weigh 3½ pounds when discharged at the dry end, which is accomplished by the hot rollers in conjunction with the intense heat of 275 degrees, developed by 45,000 feet of 1-inch steam pipe in the machine, together with hot fan-blast circulation. The successful drying of hardwood material in such temperature is a recent and startling advance in woodworking methods.

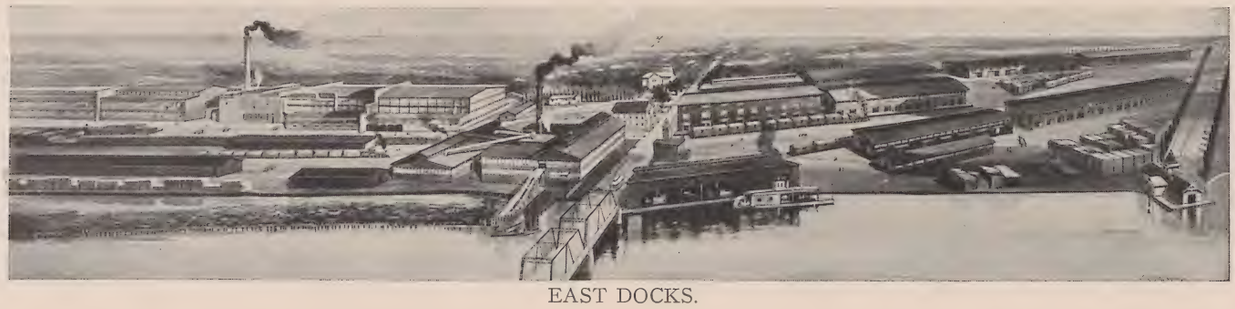
The second style of machine dryer operated is of the "Nichols" vertical type, with 30-inch by 100-inch platens, or steam boxes, that clamp the veneers and automatically release them every twelve seconds, to permit of contraction and discharge of vapor, this operation being governed by a steam clock, which is an interesting and clever mechanism.

The veneer mill turns out the door veneers as described, cut to size, thickness and proper widths and lengths, and dried ready for the gluing and pressing mill, where they are applied to the cores and the completed parts of the door made ready for the door plant, which turns out the finished product ready for shipment. Hydraulic presses are used largely in this process and the veneers glued to the cores under a pressure that seems to weld the pieces of wood together.

The enormous quantity of glue consumed has developed a scientific testing and mixing process, whereby the glue is dissolved and mixed in large vats and distributed about the mill through pipe lines, being tested almost continuously to guarantee a uniformity of strength. The use of the glue in such quantities has naturally developed an accuracy in mixing and testing that can not be expected from small mills, and has also developed accurate data as to the merits of different manufactures and grades of glue. Such features explain the readiness with which the company guarantees its product in every particular.

In the door plant the same efficiency prevails, with a mechanical equipment equal, and in many respects superior, to the

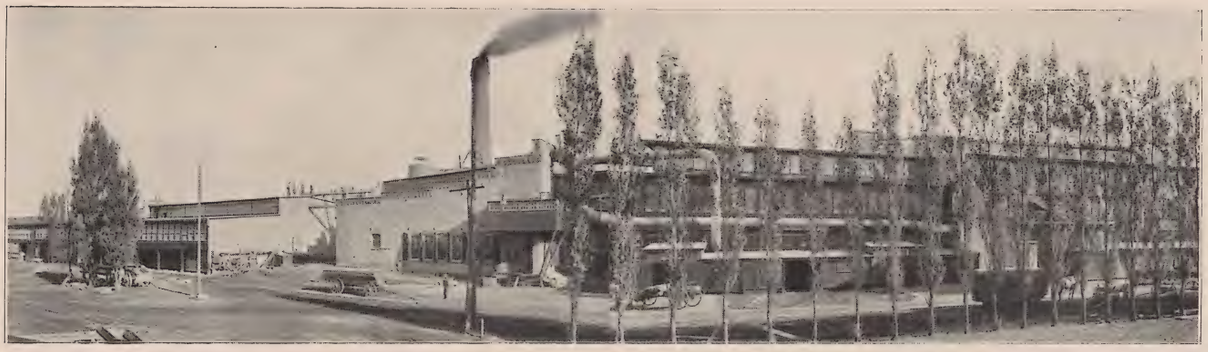
THE BUILDINGS SHOWN ABOVE FORM THE IMMENSE AUDITORIUM HOTEL, CHICAGO.
They are Finished Above the First Floor in Korelock Birch.



EAST DOCKS.

PORTION OF EAST DOCKS, SHOWING SAW MILL AND LOG RAFTS.

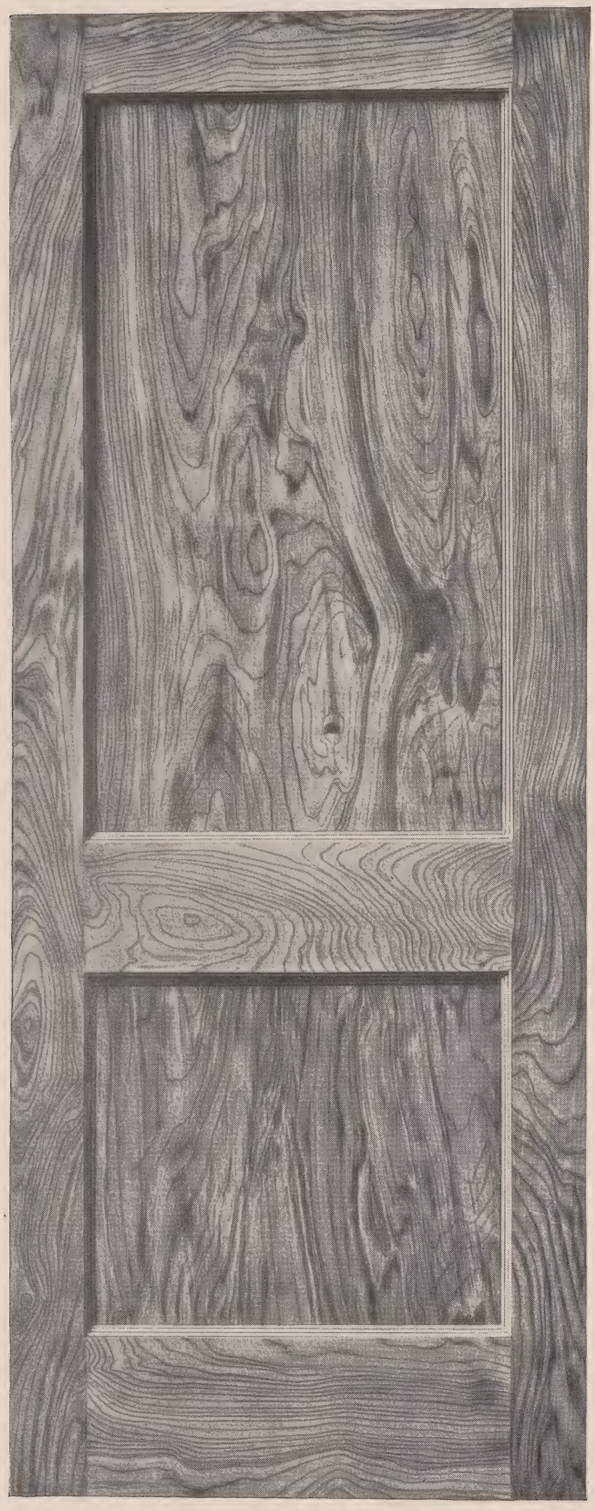
VENEER MILL AND LOG YARD, WAREHOUSES IN DISTANCE.



DOOR AND SASH MILL AND GLUE MILL.

DRY LUMBER WAREHOUSE, No. 18.
CAPACITY, 5,000,000 FEET.

best in the world. Many machine attachments, and in some cases complete machines, have been built in the shops of the



A KORELOCK DOOR DESIGN.

SHOWING FIGURE OF BIRCH ROTARY VENEER AS IT COMES FROM THE LATHE.

company for its own use, and are not to be found in the machinery market or in use in other mills.

The process through the door plant shows the same careful attention to merit and detail that is evident throughout, and the finished door, on its arrival at the storage warehouses and shipping yards of the company, is as perfect as human ingenuity and machinery can make it.

After a careful study of the facilities and methods, the possibility of producing and marketing such a superior article at 30 per cent of former market values, is explained. The company, backed by its timber investments, representing more than a billion feet of the choicest forestry of Wisconsin and Michigan, supplies its veneer mill with selected logs from its own cut, and thus the veneer mill has not only the benefit of selected material, but at a minimum cost. Logs not adapted to the veneer mill are handled through the company's saw-mill plant, with a capacity of 75,000,000 feet per annum, and as less than 25 per cent of the logs are sent to the veneer mill, the choice fibre and rich grain conspicuous in the finished doors are explained.

Another feature explaining the low price on these doors is embraced in the facilities for marketing and distributing the product, large local stocks being carried at distributing points throughout the country, and, in the neighborhood of such stocks, selling offices for placing the product with the dealer, thus doing away with the ordinary jobber's profits. These distributing points include Chicago, Minneapolis, St. Louis, Kansas City, Denver, Louisville, Pittsburg, Cleveland, Baltimore, Boston, New York and many others.

Over fifteen hundred of these "Korelock" doors are made per day, in addition to a large miscellaneous line of general millwork and lumber products. The plant also handles an extensive lumber business, as indicated by its saw-mill capacity of 75,000,000 feet per annum, the total consumption of the woodworking departments being something in excess of 50,000,000 feet per annum. The daily production in windows is about two thousand in ten hours, and of blinds five hundred pairs, giving a total number of openings in doors, sash and blinds of over 4,000 in ten hours. As the average house will only consume about forty of these openings, the product is the equivalent of 100 houses per day.

The magnitude of the plant may be appreciated in a measure by a few statistics that indicate the dimensions. Our illustrations give the impression but figures to supplant them are most satisfactory: Twenty miles of logging railroad in operation; docks at factory, two miles; thirty-eight acres of floor space, containing twenty-eight miles of steam and water pipes.

The annual sales of the company, including all departments, branches and subsidiary companies, exceed five million dollars per annum.

The capital invested runs well up into the millions, and the number of hands employed in the company's operations, from the woods through to the distributing points, exceeds three thousand.

The "Korelock" doors are being imitated to some extent by smaller plants, but in no case can they produce the Korelock core, and while some of these imitations are quite satisfactory so far as we know, it can reasonably be assumed that the product being imitated is the standard.

In the above sketch of the operations of the Paine Lumber Company we have endeavored to give some idea of the perfection of system and great resources essential in the production of the "Korelock" door to increase the possibilities of the output and at the same time to reduce the cost to a point where the highest type of door may be brought within the means of the humblest cottager, thus adding materially to the comfort and sanitation of the home, as well as to the economy in all buildings.

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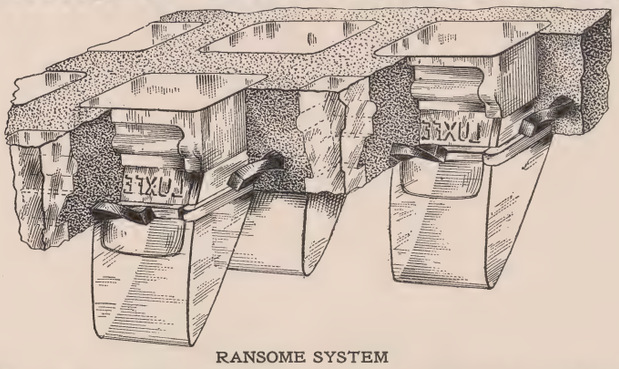

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All Steel Imbedded in Concrete

Watertight and Free from CONDENSATION

Note the twisted TENSION RODS shown in illustration

RANSOME SYSTEM

LUXFER PRISMS IN RE-INFORCED CONCRETE SETTING HAVE NO EQUAL

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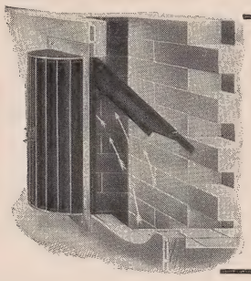

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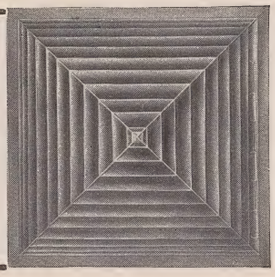

ASSOCIATION NOTES.

ST. LOUIS ARCHITECTURAL CLUB.

At a recent meeting the club was addressed by Henry H. Humphrey on the subject of "The Relation of the Consulting Engineer to the Architect." The annual election of officers was held on April 14.

NEW YORK CHAPTER, A. I. A.

The regular monthly meeting was held April 11 at 8:30 p. m. Among the important subjects considered were the bill to regulate the practice of architecture now pending in the state legislature, and the report of the committee on the revision of the building code.

CINCINNATI CHAPTER, A. I. A.

The smoke question was the sole topic of conversation at the banquet of the Cincinnati Chapter of the American Institute of Architects at the Burnet House. Speeches by Dr. C. A. L. Reed, Superintendent Fehrenbach, of the City Hospital, and Professor Marx, of the University of Cincinnati, all dealt with various phases of the smoke nuisance and its prevention by proper architectural construction. Discussion followed the speeches.

WASHINGTON STATE CHAPTER, A. I. A.

The Chapter held its regular monthly meeting at Tacoma. Representative architects of Seattle and Tacoma were present and sat down to dinner at 6 p. m. During the meal operatic selections were given by the orchestra. At the business session afterward, Vice-President Bullard took the chair and an interesting discussion took place on the ventilation of public and other buildings. Other subjects brought up were the consideration of a code of ethics for the profession and the scale of charges. It was resolved to amend the schedule to conform to that of the American Institute of Architects. The principal speakers of the evening were Messrs. Myers, Gould, Stephens, Graham, Schack and Russell. A course of papers on subjects of interest to the profession has been arranged for future meetings. It is five years since the Chapter met in Tacoma before and, owing to the success of this meeting, it was decided to hold future meetings in Tacoma as well as Seattle.

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MINNEAPOLIS, MINN., Lumber Exch.
BALTIMORE, MD., Calvert Building

ILLINOIS CHAPTER A. I. A.

The regular monthly meeting, preceded by dinner, was held on the 9th. At the request of the A. I. A. a committee was appointed to consider the requirements of the proposed form of specification that the Institute has under advisement. This committee consists of W. A. Otis, chairman, A. F. Woltersdorf and C. S. Frost. The secretary of the national committee is Allen B. Pond. The president reported that an unusual effort was making to increase the membership of the chapter and stated that the present was a most favorable time for the required examinations.

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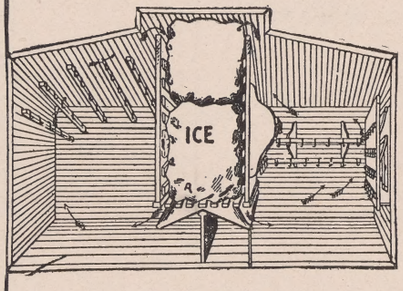

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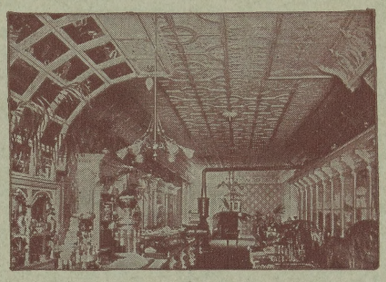

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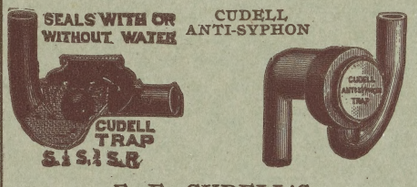

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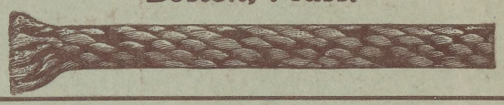

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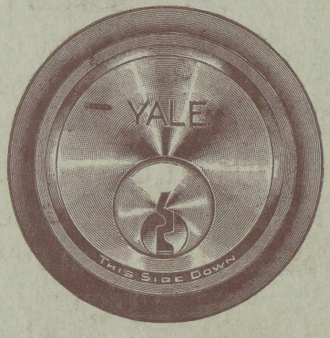

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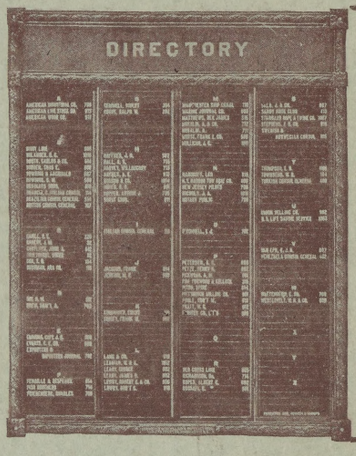

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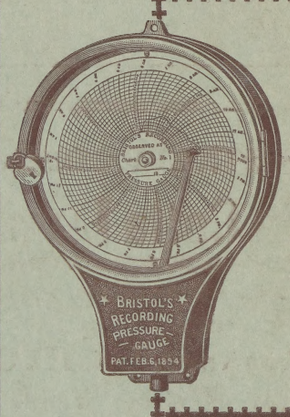

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